The International Journal of Indian Psychol
ISSN 2348-5396 (e) | ISSN: 2349-342
Volume 4, Issue 3, No. 9 IP: 18.01.052/20170403
ISBN: 978-1-365-95950-9
http://www.ijip.in | April June, 2017

A Review of the Relationship between Parental Involvement and Students' Academic Performance

Sandeep Kumar Jaiswal[1]*, Rashmi Choudhuri[2]

ABSTRACT

Parental involvement in the education of their children is a key function of child total functioning as well as their academic success. This paper review the research literature on the relationship among parenting practices such as parenting style, parents' expectations, parental home and school involvement activities and students' academic performance with the focus on elementary and middle school level. To conduct a comprehensive review on above relationship, researchers have used JSTOR data base and Google Scholar. The reviews of empirical researches indicate that different constructs of parental involvement play an important role in various ways. Several studies however indicate a decline in parental involvement during the middle or above school levels. Furthermore, the review indicates that authoritative parenting style is positively associated academic performance across all school level, although this finding is not consistent across ethnicity, culture and socioeconomic status. Parental home based and school based involvements have also been positively related to academic performance with some inconsistency. One the other hand parental expectations for their child educational attainment have the strongest impact on academic performance compared with other types of parental involvement constructs such as participation in school events, parent-child communication, and help in homework.

Keywords: *Parental Involvement, Parenting Style, Parents' Expectations, Parental Home Involvement, School Involvement, Academic Performance*

Parental involvement in education of their children is a key function of child total functioning as well as their academic success. Parental involvement practices at home or at school have been found to influence children's academic performance (Miedel & Reynolds, 1999; Hill & Craft, 2003). Parents play a dynamic role to enhance their children's academic outcomes. They provide financial support, emotional support, motivational support and facilitate the sources (e.g., Books,

[1] Research scholar, Faculty of Education, Banaras Hindu University, Varanasi, Uttar Pradesh, India
[2] Professor, Faculty of Education, Banaras Hindu University, Varanasi, Uttar Pradesh, India
*Responding Author

Received: April 6, 2017; Revision Received: May 2, 2017; Accepted: May 15, 2017

© 2017 Jaiswal S, Choudhuri R; licensee IJIP. This is an Open Access Research distributed under the terms Creative Commons Attribution License (www.creativecommons.org/licenses/by/2.0), which permits unrestricted use, distribution, and reproduction in any Medium, provided the original work is properly cited.

Newspaper, and Educational toys etc.) to ensure their children's better academic performance. Despite the importance of parental involvement in students' education, the operational term of parental involvement has not been appeared consistently in different research studies.

Parental involvement can be defined as any interaction between parents and children at home or with the school to ensure that the children's academic performance is going in a positive way. Feurstein (2000) defined parental involvement as activity encompassing a wide range of behaviors discussing school activities with children to attending parent-teacher conference. Moreover, Holloway et al. (2008) defined parent involvement as the initiation of home based behaviors like monitoring homework as well as school based activities such as attending school events and communication with teachers. In a more constructive way, Ralph McNeal Jr. (2001) listed four elements of parental involvement. One of the most important element of this model was parent child discussion. Other elements of Ralph McNeal Jr. model were parents' involvement in Parent Teacher Organization (PTO), direct engagement in school activities and monitoring children's progress. Furthermore parental involvement has been constructed in various research studies as representing different parental practices and behaviours such as parent child discussion (e.g., Christenson et al., 1992), parental expectation for their children academic achievement (e.g., Hall et al.,1997; Syb et al.,2008; Sanders & Sheldon,2009), parents' participation in school activities (e.g., Barnard, 2004; Stevension & Baker,1987), and different parenting styles (e.g., Dornbush et al.,1987; Steinberg et al.1992).

This inconsistent construct of parental involvement makes it difficult to arrive at any general conclusion across studies. On the other hand research studies also show inconsistent findings. Some research studies revealed a positive relationship between parental involvement and students' achievement (Barnard, 2004; Christenson et al., 1992; singh et al., 1995) and others reported no measurable to negative effect of parental involvement on academic achievement (Keith at al., 1986; Tokac & Kacayoruk, 2012). Keeping in mind this contradictory constructs and outcomes of parental involvement, in this paper an attempt has been made to synthesize the research literature on the relationship between parental involvement and academic achievement of students with focus on elementary and middle level. In addition, which parental involvement construct is more effectively associated with students' academic performance have also been emphasized in this paper.

REVIEW PROCESS

To conduct a comprehensive review of the literature on the relationship between parental involvement and students' academic performance, researchers have used JSTOR data base and Google Scholars. The search was not limited to a particular date range. The following terms were used as keywords to reflect parental involvement in education: Parental involvement, Parental home based involvement, parent school partnership, parent participation in school activities, parenting styles, parent child discussion and parental expectation or aspiration. On the other hand

academic performance included Grades, GPA (Grade Point Average), Math achievement test, Reading achievement test, English achievement test, and Science achievement test.

Parenting style and Academic performance

One of the most important construct in the development of students' social and academic achievement has been termed as parenting style. Parenting style is defined as a complex set of behaviors, attitude and emotional climate in which parents raise their children (Shut et al., 2011; Darling and Steinberg, 1993). Boumrind (1978) identified three primary parenting typologies as authoritative, authoritarian and permissive. In addition, Maccoby and Martin (1983) added one more dimension named indulgent. After factor analysis of data on these basic typologies Baumrind (1991) characterized parenting style in two dimensions: demandingness and responsiveness. Authoritative parents are both demanding and responsive in nature. They show affection with their child and support their exploration and pursuit of interests (Baumrind, 1978; Dornbuch et al., 1987; Maccoby and Martin, 1983). Authoritarian parents are demanding but not responsive. They show a low level of interest, lower affiliation and not interested in open communication with their child (Baumrind, 1978; Dornbuch et al., 1987; Maccoby and Martin, 1983). Permissive parents are responsive but not demanding and on the other hand indulgent parents are neither demanding nor responsive (Dornbuch et al., 1987; Maccoby and Martin, 1983). In this section, an overview of the relevant research studies on parenting style and its impact on student outcomes have been presented in brief.

A majority of research studies have concluded a positive relationship between authoritative parenting style and students' academic achievement (e.g., eg. Dornbush et al., 1987; Lamborn et al., 1991; Steinberg et al., 1991), on the other hand authoritarian and permissive parenting styles are negatively related to academic outcome (Baumrind,1978; Dornbush et al.,1987; Maccoby,2000). In a very earlier study, Baumrind (1967) found that preschool children of authoritative parents were more active, prosocial and achievement oriented but preschool children of permissive parents show low self reliance and under competence. Baumrind (1991) again examined this relationship during adolescence and concluded that school outcomes were positively associated with authoritative parenting style as found in earlier preschool students. In another study, Dornbush et al. (1987) developed and tested a reformation of Boumrind's (1978) typology of parenting styles. They concluded that authoritarian and permissive parenting style was negatively associated with both male and female adolescents. Parental affection was also found to be one of the strongest predictors of students' school achievement, for example in a study Deslands et al. (1998) found that parental democratic support is a strong predictor of school achievement for both males and females. Jaynes(2007) meta analytical study also approved this strong positive association between parenting style (defined as supportive, helpful and maintaining an adequate level of discipline) and academic performance for secondary school students.

In another study, Steinberg et al.(1992) found that authoritative parenting tends to a better school performance(GPA) and school engagement of adolescents, further they concluded that these parents also influence their children's through their direct involvement in school activities such as attending parent teacher meetings, helping in homework, and by setting and maintaining high performance standards. In the same vein, Nyarko (2011) found that both mother's and father's authoritativeness was positively related to the academic achievement of secondary school students. In another study, Paulson (1994) explored the influence of parenting style (demandingness and responsiveness) on the achievement of early adolescents. Both maternal and paternal demandingness and responsiveness predicted the achievement positively. Desiandes et al. (1997) conducted a study with two instruments developed by Steinber et al. (1992) and Epstein et al. (1993). They concluded that adolescents who perceive their parents as being firm, warmth, and democratic in nature, performed better at secondary school than their peers. This result also conforms the association reported by other researchers (e.g., Dornbush el al.,1987; Kim, 2002). In a study, Marchant (2001) reported that parenting styles (demandingness and responsiveness), parental involvement (values and participation in school functioning), and teaching styles (demandingness and responsiveness) factors significantly predicted their children's school achievement. These findings also confirm the association between supportive environment and academic achievement at early level of adolescence.

Adaptation of academic strategies also is affected by parenting styles. For example, investigation of Aunoka et al. (2000) shows that adolescents from authoritative families applied most adaptive achievement strategies on the other hand adolescents from neglected families applied maladaptive and task avoidant strategies. Further Aunoka et al. (2000) concluded that these strategies were significantly associated with academic performance. Parenting styles were not only related with achievement but also moderated the parenting practices. The relationship between parental involvement practices (eg. monitoring and helping in homework) and adolescents' school achievement have been found better for authoritative parents (Paulson et al., 1998; Steinberg et al.1992).

School-based Parental Involvement and Academic Performance

Parents school based involvement refers to parents' participation in school activity such as Parent Teacher Organisation (PTOs), volunteer work, visit to classroom and interaction with class teachers. A substantial amount of research studies have shown that parents' involvement in school is associated with children's academic performance in various ways. Parents' school involvement positively affects school environment and classroom learning (Pena, 2000). In addition, parental school involvement not only enhances the teacher efficiency but establishes a good school community relationship also (Henderson,1987; Pena, 2000). Within an elementary school context, parents are more likely to visit the classroom and make interaction with class teachers. Such visits and interactions increase parents' knowledge about the curriculum, enhance

mutual understanding and increase the effectiveness of parental involvement at home (Comor, 1995; Epstein, 2001; Hill & Taylor, 2004).

In a study, Deutcher and Ibe (2000) found a positive relationship between parents' volunteering at school and motivational level of students. They also concluded that students whose parents regularly kept contact with teacher were more motivated to search extra information about a topic not only in school but outside of school also. Miedel and Reynolds (1999) conducted a longitudinal study to investigate the association between parent involvement in intervention and children's later school competence. Results of this study indicate that number of activities in which parents participated in preschool were significantly related to academic achievement and lower rate of grade retention at 8th grade. Using data from Chicago longitudinal study, Barnard (2004) reported that parental school involvement activities such as communication with the school, help in class activities and participation in school activities were significantly associated with lower rates of high school dropout, greater likelihood of completing high school and achieving a high grade. Further, this study revealed that parent involvement in elementary school provides long lasting benefits to children throughout high school.

An important trend has been found by the researchers that the parents of early school aged children are likely to be more involved in school activity rather than the parents of older children (Epstein and Dauber, 1991; Stevenson and Baker, 1987). Parents' positive attitude towards teachers, school and child education at elementary level also tend to enhance academic performance and such parents make contact with teachers when students have academic or behavior problems (Topor, 2010). In a study, Shumow et al. (2004) found that the level of parents' education positively associated with parents' involvement in high school. Increase in parents' education level gradually tends to increase parents' involvement in school (also found in Stevenson and Baker, 1987). Further Shumow et al. (2004) concluded that parents' involvement in school was positively related to how skilled students feel during class, their grade attainment and long term academic expectations.

In a study McNealJr. (2014) found that parental involvement in PTOs (Parent Teacher Organizations) meeting is strongly associated with 8th grade students' science achievement but it has weak to non-significant relationship with absenteeism, homework and truancy. Using data from the National Longitudinal study of Adolescent Health, Mo and Singh (2008) concluded that parental involvement at middle school had a significant effect on students' engagement at school. Students whose parents stay connected with the school are likely to have higher school engagement and better performance. The level of parental involvement and its impact on students' academic achievement has not been found in the same way for elementary schools to upper school levels. Some researchers have reported that the strength of the relationship between parental involvement and academic achievement tent to decline from elementary level to upper school level (Singh et al, 1995: Fan & Chen, 2001).

In a meta analytical study at middle schools, Hill and Tyson (2009) found that parent's school based involvement activities such as volunteering at school and attending school events were moderately associated with achievement, whereas Fan (2001) reported, communication with school teachers have a negative relationship with students' academic achievement. In the same way, Tan and Goldberg (2009) reported that parental direct involvement at school (e.g., Attending PTA, helping in the classroom, contact with class teachers, and attending school functions) were positively associated with early adolescents' school enjoyment but had a negative association with overall grades. Further, they indicated that negative association was held only for those students whose parents had a belief that their children did not need help in school. In a study, Tokac and Kacayoruk (2012) found that parents attending school events have a negative effect on middle school students' math achievement. The reason behind this adverse effect they suggested that the parents' collaboration might make the students feel pressure and this pressure affects the students' achievement. Furthermore, McNealJr (2001) addressed the influence of parental involvement at secondary school and concluded that PTO involvement and monitoring were positively associated with behavioral outcome (reduced likelihood of truancy and dropping out) while inversely related to cognitive outcomes such as lower science achievement.

Parental Expectation/Aspiration and Academic Performance

Parental expectation and aspiration have been used interchangeably in most of the research studies. Taken together, expectation and aspiration are those belief or judgment that parents have about their children's future academic performance which could be reflected in high grades, high level of schooling attained or college attendance (Shute, 2011; Goldenberg et al., 2001; Glick & white, 2004). Parental expectation or aspiration have appeared as a variable in many parental involvement studies and generally have been found to play important role in children's academic performance. For example, parental expectation as one of the most important predictor of academic achievement has been found in various meta analytical studies (e.g., Fan & Chen, 2001; Jeyens, 2007; Wilder, 2014).

Further, these meta analytical studies concluded that parental involvement appeared to have a more significant impact at elementary school level than later school level. When parents keep high expectation for their children then they are more likely to provide resources such as books and other educational materials, help in home work and engage in cognitive enrichment activities such as a trip to the zoo, library etc. (Alexander & Entwistle, 1996). Similarly, Sanders and Sheldon (2009) found that students, whose parents showed high educational expectation to their children, discussed with their children about school and future plans and monitored their homework, had a tendency to get a higher grade in English and reading achievement tests. In general, students whose parents hold high expectation from them, perform better in school and persist longer in school than children whose parents hold relatively low expectation (Davis-Kean, 2005; Pearce, 2006). Furthermore, Eccles et al. (1982) assessed the parents' expectation

on middle age children's achievement self-concept and belief. They found that parental expectation indirectly affects students achievement by parents' influence on their child's abilities and capabilities, which in turn enhance academic competency belief and sense of efficacy.

In a study of 9-16 years old children, Benner and Mistry (2007) found that parental expectation was associated with students' perception of academic skill and ability to learn a new concept in math reading achievement, which in turn related to children's achievement. Moreover, Halle et al. (1997) and Syb et al. (2005) concluded that parents who show higher expectation and place a higher value on their child's educational attainment tend to be more engaged in achievement related activities such as help in reading, sending them to the extracurricular lesson and monitor their educational progress. In a longitudinal study, using data from Chicago longitudinal study Gill and Reynolds (1999) found that children who reported that their parents expected them to do well in middle school, scored significantly higher in reading and math achievement. In another longitudinal study of 6-13 years aged children conducted by Putchick et al. (2009), was demonstrated the long-lasting effect of parental expectation on children's expectation. They concluded that parental educational expectations influenced their children's academic performance five years later via mediating effect of children's expectations, even controlling the children's baseline academic achievement.

Home based Parental Involvement and Academic Performance

Home based involvement includes strategies like communication between parents and children, creating a learning environment at home, monitoring and helping in homework. In a study on secondary school students, Zakaria (2013) found that interaction and communication, parenting practices, leisure, openness, and acceptance were the predictive factors of parental involvement and had a positive relationship with students' achievement. Students may perceive their homework activities as less difficult and more enjoyable when parents are involved. For example, Leon & Richards (1989) concluded that when parents assist their children in homework then they student enjoy doing homework. Using self-determination theory as a theoretical framework for investigating the role of parents in the quality of motivation that students adopt toward homework, Katz et al. (2011) concluded that parents' behavior such as competence, beliefs and positive attitude towards the task of homework, support the children's psychological needs and these needs positively related to children's autonomous motivation for doing homework. Parents' positive attitude toward their role raised academic performance also. For example, Hoover-Dempsey and Sandler (1997) found that parents' positive attitude toward their own role in their child's education, influenced their involvement which was reflected as child's wellbeing and good academic performance. Similarly, Cooper et al. (1998) found that parents' attitudes toward homework were positively associated with students' higher grades in elementary school. In another study Hill and Craft (2003) found that parent's engagement in child's home activities was a significant predictor of math achievement score among elementary school students.

In a study on middle school students, Shui-Chu and Willms (2009) reported that parents from a different level of family background provided an almost similar level of home supervision. They also concluded that parents' discussion with children about school related activities at home had the stronger relationship with academic achievement rather than parents' participation at school. In a study, Regnar (2009) found that parents academic monitoring positively predicted mastery goal of middle school students. Clark (1993) concluded that if parents monitor their children's behavior after school then children were more likely to achieve high grades in school. In the same way, Keith et al. (1993) conducted a study on middle school students and found a positive relationship between parental involvement in homework checking and students' academic performance. They Further concluded this achievement tend to high when parents monitor their children's activities such as television watching.

A study drawn upon ecological perspective, Tam and Chan (2009) concluded that parents' provision of guidelines and structure were positively related to children's efficacy beliefs in academic performance as well as self-regulated learning among elementary school students. Research studies show that the benefit of parent's involvement varies according to students' school level (Regner, 2009; Seginer, 2006; & Jeynes, 2007). Despite these positive impact of parents' involvement in home based activities, some researchers have highlighted that parental home based involvement create null to negative outcomes also. For example in a study Pezdek et al. (2002) found, parent involvement in homework activity is unrelated to children academic performance. Similarly, Fan and Chen (2001) reported that parental involvement in the home as measured by parental supervision is not significantly associated with academic achievement across middle school. This inverse pattern also emerged in Jeyens (2005) meta-analysis, which reported no relationship between parents' involvement in home activities and academic achievement among elementary school students.

CONCLUSION

The research studies on parenting practices as related to students' academic achievement have focused on several important parenting constructs such as parental involvement in home activities, participation in school events, monitoring and communication with children, parenting style and educational expectations. In terms of these parenting practices, the research studies suggest that when parents are actively involved in their children's educational activities, show affection to their children, participate in school events, democratic and responsive in nature, and keep positive educational expectation then students' academic performance becomes higher. Although the conclusion that parental involvement has a positive impact on students' academic performance is an intuitively appealing concern for educationist but there is still a great deal of inconsistency and contradiction in the empirical research literature. Moreover, the multifaceted construct of parental involvement and the different measurements for academic performance contributed to the inconsistency and contradiction make it difficult to come to general conclusion. Apart from this, the psychological variables of students like students' will to learn,

their ability, inclination towards academics perseverance and other relevant variables have not been considered in the studies reviewed. This may also be the cause of inconsistent and contradictory findings in the studies mentioned in the review.

In term of parenting style, the research studies indicate that authoritative parenting style to be positively associated with students' academic achievement across all school level. However, some of the studies have concluded that this association is not consistent across ethnicity, culture and socioeconomic status (Dornbush et al.,1987; Steinberg et al. 1992; & Leung et al.,1998). Authoritative parenting was positively associated with Grade Point Average for white families but not for Asian, Black, and Hispanic (Dornbush et al., 1987; Steinberg et al. 1992). In addition some researchers have claimed that parental expectations for their child educational attainment have the strongest impact on academic performance compared with other types of parental involvement construct such as participation in school events, parent child communication and help in homework (Fan, 2001; Fan & Chen, 2001; Singh et al., 1995). Furthermore, studies also reveal that parents' educational expectations have a significant impact at elementary level than in later grades (Jeynes, 2007).

Parents' home based involvement and school based involvement have also been found positively related to academic performance. In home based involvement strategies such as checking homework or helping in homework has been found inconsistently associated with academic achievement as compared to other types of home based involvement. Parents' School based involvement including volunteering at school, visiting the school, and attending school events are also positively associated with the academic performance but this association becomes weaker when students move from elementary school level to upper school level (middle or high school). At upper school level schools are large and complex, students have multiple teachers and it becomes difficult for parents to build warm relation with each teacher and spend sufficient time in school. Moreover at upper school level students become more independent and responsible so they do not want their parents to visit the school (Stevenson & Baker, 1987).

Overall, most of the view of authors and finding of the studies in this literature review have concluded that parental involvement, whether at home or at school, have a positive relationship with students' academic performance. Furthermore, the impact of this positive relationship tend to fall as children get older or as they entered in higher schools level but we can't deny the importance of parental involvement practices during the entire period of students' schooling to ensure their positive development and better academic performance.

Acknowledgments

The author appreciates all those who participated in the study and helped to facilitate the research process.

VIEWPOINT

K-12 Virtual Schooling, COVID-19, and Student Success

Erik Black, PhD, MPH
Department of Pediatrics, University of Florida College of Medicine, Gainesville.

Richard Ferdig, PhD
Research Center for Educational Technology, Kent State University, Kent, Ohio.

Lindsay A. Thompson, MD, MS
Department of Pediatrics, University of Florida College of Medicine, Gainesville; and Department of Health Outcomes and Biomedical Informatics, University of Florida College of Medicine, Gainesville.

The coronavirus disease 2019 (COVID-19) pandemic has significantly affected K-12 education in 2020.[1] To protect students and staff, as well as to flatten the infection curve, parents, teachers, and policy makers endorsed and implemented a modified version of homeschooling in the spring in the US and across the globe. Teachers used some form of paper mailings and electronic technology (eg, video conferencing, emailing) to deliver content to students, while parents assumed a coteaching responsibility. Most parents, schools, and teachers were unprepared and untrained to handle the complexities inherent to educating as well as the demands of the technology needed to support these efforts. Although teachers deserve high praise for their rapid response, the educational outcomes were unsatisfying, families were burdened, and most are hesitant to repeat the same format. As government officials attempt to plan for the fall, the American Academy of Pediatrics released a statement supporting the return to traditional school as soon as possible to preserve education and socialization while limiting the exacerbation of existing educational disparities for high-risk populations.[2]

This unprecedented spring transition was an introduction to K-12 online learning for many educators and families. However, K-12 online learning started in the mid-1990s under the broad label of *K-12 online and blended instruction* (blended refers to the use of both face-to-face and online formats). While more than a billion children worldwide newly experienced this pandemic-related abrupt transition to online education, at least 2% of US students and many more globally had already been participating in online instruction from K-12 online or virtual schools.[3] As policy makers, health care professionals, and parents prepare for the fall semester and as public and private schools grapple with how to make that possible, a better understanding of K-12 virtual learning options and outcomes may facilitate those difficult decisions.

Virtual schooling is the delivery of instruction through technology to students physically separated from their teachers. Formal virtual schools exist nationwide at all levels from kindergarten through 12th grade for both general and special education. At the elementary school level, online learning typically requires parental involvement and facilitation. Students at the middle school and high school levels often independently communicate via email, text, telephone, or video for group and individualized learning. Virtual schooling classes are frequently asynchronous, where students and teachers do not have to be online at the same time, allowing for learning anytime and any place.[4] Unlike the rapid transfer of face-to-face curriculum into an online format in spring 2020, virtual schools use curriculum designed specifically for online instruction. These schools mostly employ teachers who are experienced online educators and often have online teaching certificates and graduate degrees that specifically include online education. Virtual schools also focus their ongoing professional development around online teaching and learning practices.[5]

Just like the myriad options that are available for face-to-face schooling in the US, virtual schooling exists in a complex landscape of for-profit, charter, and public options. For example, in Florida, school districts have partnered with Florida Virtual School, a state-funded public entity. Florida Virtual School provides counties with curricula and, in some cases, both curriculum and instruction for K-12 online classes. Students can take 1 or all Florida Virtual School classes channeled through their local public school. This partnership, which includes highly trained online instructors and high-quality curriculum specifically adapted for online delivery, produces similar or better performance when compared with face-to-face high school students on required state end-of-course examinations.[6] However, not all virtual schools are created or maintained equally. Parents need to seek reviews and ask for educational outcomes from each virtual school system to assess the quality of the provided education.

Importantly, K-12 virtual schooling is not suited for all students or all families. Individual students need to be motivated, organized, and supported. Differences in their environment, meaning their access to instructional support as well as their internet access, can cause significant variations in student success. Finally, while research is scant, 1 review indicates that specific teaching strategies used in online and blended environments can have a dramatically positive effect on outcomes.[7]

One of the more recent and promising advantages of virtual K-12 schooling is to meet the educational needs of children with special health care needs. Research supports that online learning can be a more suitable solution than attending a face-to-face school, especially when a student may experience frequent absences due to illness and/or frequent visits for chronic health management. Preliminary work by these authors has found that children who qualified for hospital homebound programs and chose to enroll in a K-12 course performed at least as well, or potentially better, than their nonhospital homebound peers. Moreover, children with special health care needs felt more in control of their education when participating in online learning.[8]

Many schools are still considering online or blended instruction as a necessary alternative or hybrid as this pandemic evolves. Also, many families may be considering whether some or all of their child's current or future education could take place online. As such, parents should evaluate the unique strengths and needs of their children by considering the following questions:

Corresponding Author: Lindsay A. Thompson, MD, MS, General Pediatrics, University of Florida, 1699 SW 16th Ave, Gainesville, FL 32608 (lathom@ufl.edu)

© 2020 American Medical Association. All rights reserved.

Downloaded From: https://jamanetwork.com/ University of Florida by Erik Black on 08/14/2020

1. Can their child maintain a study schedule and complete assignments with limited supervision?
2. Would their child be able to ask for help and effectively communicate with a teacher via telephone, text, email, or video?
3. Does their child have an intrinsic drive to learn skills, acquire knowledge, and complete assignments?
4. Does their child possess foundational reading, writing, math, and computer literacy skills?

Parents should also learn more about the virtual school options available to them. They should seek to understand the following:

1. How will student information be shared with their local school district?
2. Is the virtual school accredited?
3. How does the virtual school comply with state standards for K-12 educators (eg, licensure)?
4. Are Universal Design for Learning[9] standards incorporated into instructional materials?
5. What support does the school provide for children with special needs?
6. What expectations does the school have for parents/caregivers?
7. What technology is necessary for participation? Who is responsible for providing it?
8. How will the virtual school facilitate communication about their child's unique needs?

The pandemic has encouraged many parents to explore educational alternatives, particularly for students who may have health concerns such as those with respiratory disease or who are immunocompromised. With social distancing creating obstacles for traditional education, K-12 online learning may become more mainstream. For more information, consider the Michigan Virtual Learning Research Institute's parent guide to online learning[10] and the Universal Design for Learning.[9] Future studies of the intersection of educational and health outcomes can clarify the effect of education on health and health on education. The COVID-19 pandemic offers a unique challenge for educators, policy makers, and health care professionals to partner with parents to make the best local and individual decisions for children.

ARTICLE INFORMATION

Published Online: August 11, 2020. doi:10.1001/jamapediatrics.2020.3800

Conflict of Interest Disclosures: None reported.

REFERENCES

1. Dibner KA, Schweingruber HA, Christakis DA. Reopening K-12 schools during the COVID-19 pandemic: a report from the National Academies of Sciences, Engineering, and Medicine. *JAMA*. Published online July 29, 2020. doi:10.1001/jama.2020.14745

2. American Academy of Pediatrics. Covid-19 planning considerations: guidance for school re-entry. Critical Updates on COVID-19. Published June 25, 2020. Accessed July 13, 2020. https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/

3. Snapshot 2019: A Review of K-12 Online, Blended, and Digital Learning. Digital Learning Collaborative. Published April 2019. Accessed July 13, 2020. https://static1.squarespace.com/static/59381b9a17bffc68bf625df4/t/5cae3c05652dea4d690f5315/1554922508490/DLC-KP-Snapshot2019_040819.pdf

4. Molnar A, Miron G, Elgeberi N, et al. *Virtual Schools in the US 2019*. National Education Policy Center; 2019.

5. Moore-Adams BL, Jones WM, Cohen J. Learning to teach online: a systematic review of the literature on K-12 teacher preparation for teaching online. *Distance Educ*. 2016:37(3):333-348. doi:10.1080/01587919.2016.1232158

6. Transforming Education Worldwide–One Student at a Time: Annual Report 2017-18. Florida Virtual School. Published December 2018. Accessed July 16, 2020. https://www.flvs.net/docs/default-source/district/flvs-annual-report.pdf?sfvrsn=9a487b2a_18

7. Pulham E, Graham CR. Comparing K-12 online and blended teaching competencies: a literature review. *Distance Educ*. 2018:39(3):411-432. doi:10.1080/01587919.2018.1476840

8. Harvey D, Greer D, Basham J, Hu B. From the student perspective: experiences of middle and high school students in online learning. *Am J Distance Educ*. 2014:28(1):14-26. doi:10.1080/08923647.2014.868739

9. CAST. About universal design for learning. Accessed July 29, 2020. http://www.cast.org/our-work/about-udl.html#.XyH3KJ5KjIU

10. Michigan Virtual Learning Research Institute. Parent guide to online learning. Accessed July 29, 2020. https://michiganvirtual.org/resources/guides/parent-guide/

© 2020 American Medical Association. All rights reserved.

Downloaded From: https://jamanetwork.com/ University of Florida by Erik Black on 08/14/2020

International Journal of Arts, Sciences and Education
Volume 3 Issue 4 | October 2022
ISSN: 2799 - 1091
Page No. 189- 196

HOME LEARNING IN TIMES OF COVID: PARENTS' EXPERIENCES, DIFFICULTIES AND COPING STRATEGIES

JOEY M. DE RAMOS
RIVINE P. SIBULO
SHERLY I. YUSON
Arawan Elementary School San Antonio District

ABSTRACT

PURPOSE. The purpose of this research study was to explore the parents' experiences of home learning in times of COVID-19 their difficulties and their coping strategies.

RESEARCH PROBLEM. How does parents overcome the difficulties experienced on home learning in times of covid 19?

METHODOLOGY. A descriptive qualitative study was planned to explore the challenges of parents about home learning and management during COVID-19 to get an insight into real-life experiences regarding their difficulties and their coping strategies.

CONCLUSIONS. Based from the findings of the study, the researcher concluded the following:

1. Home learning foster difficulties in this pandemic time such as retrieval and distribution process of the learning packages, simultaneous roles at home, education and work and health related restrictions.
2. For the strategies encountered in modular distance learning includes the proper time management, constant communication with the adviser regarding the distribution and retrieval of the learning packages and lessons which are very hard to understand and the attitude towards the new normal learning.

SIGNIFICANCE. This action research was conducted to help teachers and school administrators to adjust their plans regarding home learning in collaboration with parents.

Keywords: COVID-19, home learning, modular distance learning, parents' difficulties

INTRODUCTION:

An overwhelming majority of the world's enrolled students have experienced the temporary closing of school during the COVID-19 pandemic in an attempt to encourage social distancing and therefore decelerate the transmission of the virus (Viner et al., 2020). Countrywide lockdowns have strongly impacted the lives of people of all occupations and all ages. The flare-up has also affected the education system across the world and has altered the lives of 1,576,021,818 learners in 188 countries (UNESCO, 2020). The lockdowns have put an unprecedented challenge on the governments to ensure that there should be continuity of learning (Chang & Yano, 2020).Nearly 200 countries shut down schools with over 90% of

ISSN: 2799 - 1091
Page No. 189- 196

these learners ranging from early years through higher education facing some sort of disruption to their education (UNESCO, 2020). School closures have unprecedentedly altered the daily lives of the student learners, their families, and their educators.

Parental involvement is an important factor for student achievement in traditional school settings. Parent support has demonstrated significant contributions to the success of learners (Borup et al., 2014; Feng & Cavanaugh, 2011; Lee & Figueroa, 2012; Makrooni, 2019; Woofter, 2019). However, parents must take on new and unfamiliar roles and responsibilities as their children participate in education while experiencing increasing instructional responsibility for their child's learning. As a result, parents often struggle with understanding the role they should play in their children's learning (Murphy & Rodriguez-Manzanares, 2009).

As the opening of classes run in the extraordinarily school year, the DepEd adopted the BE-LCP which permits multiple learning delivery modalities including modular distance learning (MDL), online distance learning (ODL), TV/Radio-Based Instruction (TV/R), and Blended Learning – a combination of different distance learning modalities. The MDL involves the use of self-learning modules (SLMs) either in print or digital format/electronic copy and various learning resources like learner's materials, textbooks, activity sheets, worksheets, study guides and other study materials. The ODL allows live synchronous instruction which requires stable internet connection but is more interactive than the other types of distance learning. The TV/R utilizes SLMs converted to video lessons for Television-Based Instruction as well as radio script for Radio-based instruction. To help learners, parents, and teachers successfully adopt these learning delivery modalities, SLMs are made available in print and offline/online digital formats.

As much as these initiatives are found to be appropriate to address the need of the time, it has also given a tough routine to parents who are working from home and simultaneously taking the responsibility that their children's learning process continues seamlessly during the times of COVID-19. Hence, the purpose of this research study was to explore the experiences of home learning in times of COVID-19 from parents' experiences, their difficulties and coping strategies.

Based from the data gathered, parents prefer to use modular distance learning in Arawan Elementary School. Since face-to-face classes are not yet allowed, the DepEd will implement Blended/Distance learning wherein the combination of the various distance learning modalities such as printed modules, offline digital modules, online, and TV and Radio-based instruction will be used by students and teachers when classes formally start (Malipot, 2020). The researcher wanted to determine parents' experiences and difficulties and their strategies to overcome these difficulty. Hence, this study was conducted.

Research Problem

This research study was undertaken to determine the experiences and difficulties encountered by parents on home learning in times of COVID

Specifically, this study sought to answer the following questions:

1. What are the experiences and difficulties encountered by parents on home learning in times of COVID?

ISSN: 2799 - 1091
Page No. 189- 196

2. What are the strategies used by parents in overcoming the difficulties experienced on home learning?
3. What plan of action may be derived based from the result of the study?

Research Approach

Self-devised questionnaires was used to collect data. Collecting answers were done through private messages, video calls and face to face interaction during the retrieval and distribution of learning packages in learning kiosks or in school. The data collection happened in different time so as to minimize face to face interaction among the informants and the researcher. The questions were validated by a master teacher and the school principal. The responses were carefully recorder, transcribed and coded in themes. Data collection was held on December 2021 to March 2022. The results were utilized for the adjustment of the Learning Continuity Plan regarding the modular distance learning.

METHODOLOGY

This part contains the methodology that the researcher used to complete this research work. It exposes the research design, respondents of the study, research instrument, data-gathering procedures, and statistical treatment of data

Descriptive qualitative study was used to explore the experiences and difficulties of parents about home learning and management during COVID-19 to get an insight into real-life experiences.

There were 15 key informants in the study. The study was conducted in Arawan Elementary School, school year 2021-2022.

Self-devised questionnaires was used to collect data. Collecting answers were done through private messages, video calls and face to face interaction during the retrieval and distribution of learning packages in learning kiosks or in school. The data collection happened in different time so as to minimize face to face interaction among the informants and the researcher. The questions were validated by a master teacher and the school principal. The responses were carefully recorder, transcribed and coded in themes. Data collection was held on December 2021 to March 2022. The results were utilized for the adjustment of the Learning Continuity Plan regarding the modular distance learning.

Responses of the key informants were translated and coded using thematic coding, which involves identifying passages of text linked by the common theme (Gibbs, 2007). This coding process allows for the categorization of codes, ultimately enabling thematic analysis of ideas. The researchers utilized the descriptive open coding to analyzed parental responses regarding their experiences, difficulties and coping strategies experienced during the COVID school closure.

International Journal of Arts, Sciences and Education
Volume 3 Issue 4 | October 2022
ISSN: 2799 - 1091
Page No. 189- 196

RESULTS AND DISCUSSION

Table 1. Difficulties Experienced on Home Learning

Themes	Informants' Transcribed Answers
Retrieval and Distribution process / times	*"Hindi ako, sigurado sa schedule ng pagkuha at pagdadala ng module sa aming barangay"* *Ang schedule (oras at araw) ng pagkuha at pagdadala ng mga module ay hindi pare-pareho bawat linggo.* *"Nahihirapan ako sa halos linggo linggo na pagkuha ng module. Mas maganda sana kung mga pandalawahang linggo ang nakahanda"*
Roles at home and work	*"Nahihirapan ako sa oras dahil sa dami ng gawain sa bahay at sa trabaho"* *"Pareho kami ng aking asawa na nagtatrabaho kaya madalas hindi na nababantayan at naasikaso ang pag-aaral ng mga bata"* *"Sa dami ng mga anak na nag-aaral, hindi lahat ay napagtutuunan ng pansin. Sabay pa ang mga gawain sa bahay kaya madalas, may mga bahagi ng module na hindi nasasagutan "*
Parents' Educational Cpacity	*"Maraming mga aralin ang hindi ko maunawaan. Madalas ay hindi naming natatapos ang aralin kaya naipapasa ito ng walang sagot"* *"Marami sa mga aralin ay hindi ko alam sapagakat kahit ako ay elementarya lamang ang natapos"*
Health related problems	*"May mga panahon na hindi naming nakukuha ng tama sa schedule ang modules dahil sa health protocol. Kapag may sipon o ubo, hindi makapunta sa school"* *" Minsan, sa dami ng gawain, nastress ang mga bata. Lalo na kapag malapit na ang pasahan tapos di pa namin matulungan dahil sa sabay-sabay na gawain sa loob ng bahay"*

Table 1 presents the difficulties experienced by the informants regarding home learning. It shows that during the retrieval and distribution process, parents' encounter difficulty due to schedule because it differs from time to time. There is no definite date and time making it hard for them to adjust their schedule. In different sitio, there were learning kiosk, but the schedule was not definite.

The second and third theme is about the roles at home and workplace and their educational capacity. It shows that simultaneous roles of parents at home seems to be a difficulty also. Their scheduled time for work is always the same with the retrieval and

ISSN: 2799 - 1091
Page No. 189- 196

distribution of learning package scheduled. Another notable answer from the informants is their education ability which is most of the times hard for them to explain thus the inability to finish their output on time is impossible. , parents are the one to get the module of their kids which became a challenge for them. It adds up to their everyday tasks as they also work and doing the household chores in their daily living (Bendijo, 2020).

Health related restriction is also included for the difficulties encountered by parents. With simple cough and cold parents won't come to school or in a learning kiosk because of the strict implementation of IATF health protocol. There are informants that they tend to ask their son/ daughter to get the modules even there is health protocol because of sickness. Though they are not allowed to go out because of the situation, they don't have a choice. The researcher take note that the school administrator must consider the result thus, helping the community to cope up with these difficulties. The lockdowns have put an unprecedented challenge on the school administrators to ensure that there should be continuity of learning (Chang & Yano, 2020)

The results above were strengthened by several theories regarding parent involvement in their child's education. Parental involvement is an important factor for student achievement in traditional school settings. Parent support has demonstrated significant contributions to the success of learners (Borup et al., 2014; Feng & Cavanaugh, 2011; Lee & Figueroa, 2012; Makrooni, 2019; Woofter, 2019). However, parents must take on new and unfamiliar roles and responsibilities as their children participate in education while experiencing increasing instructional responsibility for their child's learning. As a result, parents often struggle with understanding the role they should play in their children's learning (Murphy & Rodriguez-Manzanares, 2009).

Table 2.Coping Strategies Employed on Home Learning

Themes	Informants' Transcribed Answer
Proper time management	*"...maraming gawain ang dapat tapusin sa tahanan. Upang magawa ko ang aking tungkulin sa pag-aaral ng aking mga anak, kailangan kong gumising nang maaga at tapusin ang gagawin."* *"Magpapaalam muna sa aking amo tungkol sa schedule ng pagkuha ng learning materials bago pumunta sa aking trabaho"* *"Magkakaroon ng tamang pagpaplano ng aking schedule upang matulungan sa pag aaral ang aking mga anak"* *"..Maaring humingi ng tulong sa aking asawa, mga matatandang anak na magtulungan sa gawaing bahay para mabigyang pansin ang pagsasagot sa kanilang module."*
Constant communication with my daughter/ son adviser	*"Mag pm o kaya ay magtext sa guro ng aking anak kung kailan ang distribution at retrieval ng module"*

ISSN: 2799 - 1091
Page No. 189- 196

	"Maging updated sa group chat tungkol sa distribution at retrieval ng mga module" *"Para sa mga lesson na hindi ko alam, maaring naman sigurong magtanong sa guro sa pamamagitan ng text, pm o video call para sa paliwanag"*
Attitude towards the new normal learning	*"Kailangan kong tulungan ang aking anak sa kanyang pag-aaral. Babaguhin ko ang aking pananaw tungkol sa distance learning, na ito ay mahirap para sa akin at ang guro lamang ang may tungkulin na magturo"* *" Mahirap pagsabayin ang trabaho at pagtuturo sa aking mga anak. Pero kung magtutulong tulong ang lahat ng miyembro ng pamilya, masosolusyunan din ito"* *"Magkaroon ng positibong pananaw na makakaya kong pagsabayin ang gawain sa bahay, pagtatrabaho at pagtulong sa aking mga anak"*

Table 2 shows the strategies of the parents/guardians on modular distance learning. For the topmost answer, proper time management is important. Parents tasks at home is endless, but with proper time management, everything can be done. Parents strategize in managing their simultaneous tasks thereby attending to their livelihood, household chores and education of their students (Bendijo, 2020).

The second theme is about the constant communication with the adviser through different platforms such as group chat and text messages on the process of modular distance learning. Due to the different modalities existing in social platforms and varied places, the community became anxious on the studies of their students (Quinones, 2020; Malipot, 2020). Communication affects the teaching-learning process (Zlatovic, 2020). Thus, parents/guardians made use of social platform to communicate and be informed of the process of modular distance learning. Social platform made communication easier for them (Anderson, 2018).

For the last theme, parents attitude towards new normal learning is important. Parents/guardians stated that they must sacrifice for their children's sake. Although, more difficulties can be experience in the coming days because of the learning situation, they must stay positive. Seeking also the cooperation and help of other members of the family will be of great help. This is supported by the Saviuc (2020), that positive attitude improves the likelihood that people will achieve their goal, speeds-up progress and makes them resilient to overcome the challenges and remain persistent in pursuit of their goal, which is the education of their students.

CONCLUSION

Based from the findings of the study, the researcher concluded the following:

ISSN: 2799 - 1091
Page No. 189- 196

1. Home learning foster difficulties in this pandemic time such as retrieval and distribution process of the learning packages, simultaneous roles at home, education and work and health related restrictions.
2. For the strategies encountered in modular distance learning includes the proper time management, constant communication with the adviser regarding the distribution and retrieval of the learning packages and lessons which are very hard to understand and the attitude towards the new normal learning.

REFERENCES

Borup, J. (2016). Teacher perceptions of parental engagement at a cyber high school. Journal of Research in Technology in Education, 48(2), 67-83. https://doi.org/10.1080/15391523.2016.1146560

Borup, J., West, R. E., Graham, C. R., & Davies, R. S. (2014). The adolescent community of engagement framework: A lens for research on K-12 online learning. Journal of Technology and Teacher Education, 22(1), 107–129.

Cavanaugh, C. S., Barbour, M. K., & Clark, T. (2009). Research and practice in K-12 online learning: A review of open access literature. International Review of Research in Open and Distance Learning, 10 (1), 1-22.

Cohen, J., & Kupferschmidt, K. (2020). Countries test tactics in 'war' against COVID-19. Science, 367(6484), 1287-1288. https://doi.org/10.1126/science.367.6484.1287

Drane, L. Vernon, and S. O'Shea. (2020). The impact of 'learning at home' on the educational outcomes of vulnerable children in Australia during the COVID-19 pandemic," National Centre for Student Equity in Higher Education, Curtin University, Australia [Online]. Available: https://www.ncsehe.edu.au/publications/learning-at-home-educational-outcomes-vulnerable-children-australia-covid-19.

Feng, L., & Cavanaugh, C. (2011). Success in online high school biology: Factors influencing student academic performance. The Quarterly Review of Distance Education, 12(1), 37-54.

Gibbs, G. (2007). The Sage qualitative research kit, 8 Vols: Analyzing qualitative data. Sage.

Goodall, J. (2016). Technology and school–home communication. International Journal of Pedagogies & Learning, 11, 118–131. https://doi.org/10.1080/22040552.2016.1227252

Hasler Waters, L., & Leong, P. (2014). Who is teaching? New roles for teachers and parents in cyber charter schools. Journal of Technology and Teacher Education, 22(1), 33-56.

Hohlfeld, T. N., Ritzhaupt, A. D., & Barron, A. E. (2010). Connecting schools, community, and family with ICT: Four-year trends related to school level and SES of public schools in Florida. Computers & Education, 55, 391–405.

The Effectiveness and Challenges of Online Learning for Secondary School Students – A Case Study

Zulaikha Mohd Basar[1], Azlin Norhaini Mansor[2], Khairul Azhar Jamaludin[3*], Bity Salwana Alias[4]

[1234]Faculty of Education, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia
zulaikhabinti@gmail.com
azlinmansor@ukm.edu.my
khairuljamaludin@ukm.edu.my
bity@ukm.edu.my
[*]Corresponding Author

https://doi.org/10.24191/ajue.v17i3.14514

Received: 15 June 2021
Accepted: 20 July 2021
Date Published Online: 31 July 2021
Published: 31 July 2021

Abstract: The COVID-19 pandemic has forced an immediate implementation of online learning. However, little is known about its effectiveness and challenges faced by the students. Thus, this study is aimed at examining the effectiveness of online learning and the challenges that it presents to pupils' abilities to learn. This study employed a case study design using a survey questionnaire, administered to 99 students from a secondary school in Jasin, Melaka. Data were analysed descriptively (calculation of percentage and frequency). Generally, the findings indicated that the students have computers or smartphones and an internet connection at home. Besides, it was found that that the ability and comfortability to use computers was high (>93%). However, their motivation in online learning was low (41.5%) and ability to work in a group was at a moderate level (66.7%). They also agreed that conventional teaching (face-to-face) was important for their learning (98%). These findings are valuable for the government, school administrators, teachers and parents to acknowledge the importance of well-equipped facilities and a stable internet connection for effective learning. However, it is recommended for future researchers to utilize a larger sample size and students from various backgrounds to better understand this issue.

Keywords: COVID-19; online learning; students' challenges; remote learning.

1. Introduction

On 25 January 2020, the Ministry of Health (MOH) confirmed the first cases of COVID-19. They involved three Chinese nationals entering Malaysia from Singapore through Johor (Berita Harian, 2020). Five days later, on 30 January 2020, the World Health Organization (WHO) declared that COVID-19 constituted a global public health emergency. By 11 March 2020, the WHO announced that the disease had become a pandemic (Cucinotta & Vanelli, 2020). The global spread of COVID-19 prompted Malaysia to implement Phase 1 of the Conditional Movement Control Order (CMCO) from 18 to 31 March 2020. This has since been followed by six further phases of CMCO, beginning on 1 September 2020 and lasting until 31 December 2020.

From 18 March 2020, all nurseries, government and private schools (including daily schools, boarding schools and international schools), tahfiz centres, and other primary, secondary and pre-university educational institutions were closed. These closures also affected every public and private higher education institution, as well as skill training institutes, nationwide. Although all of these institutions have reopened since the end of the CMCO period, several states have had to close

educational facilities again due to the recurrence of COVID-19. These included Selangor, Kuala Lumpur, Putrajaya, Sabah, Sarawak, Negeri Sembilan and Johor.

Inevitably, the closures affect the daily lives of students, teachers and any individual involved with educational organisations throughout the country. During the CMCO period, face-to-face teaching, which has been practised for a considerable length of time, had to be suspended (Ariffin, Halim & Darus, 2020; Ehwan Ngadi, 2020; Mansor, Zabrani, Jamaludin, Mohd Nor, Alias, & Mansor, 2021; Raheim, 2020; Samat, Awang, Hussing & Nawi, 2020). Given that it is unclear when the pandemic will subside, educational institutions around the world have initiated online learning to ensure that pupils' education can continue, even if they are at home.

Numerous studies have been conducted about the effectiveness of online learning, and the challenges and restrictions that it can cause to students have been considered. Among these are studies conducted by Hazwani et al. (2017), Irfan and Iman (2020), Awal et al.(2020), Wildana et al. (2020), Muhammad and Kainat (2020), and Nurul Haidah et al. (2020).

Irfan and Iman (2020) contend that online learning is ineffective and is conducted inappropriately. They demonstrate this with reference to several factors, such as unsuitable internet facilities, teachers' inability to implement online learning, and the lack of cooperation given by parents. Contrastingly, Awal et al. (2020) found that online learning is effective but inefficient. They understand online learning to be effective as a response to the urgency of the pandemic; however, learning outcomes cannot be met, as it requires significant costs to purchase suitable internet packages.

Furthermore, Wildana et al. (2020) consider online learning to be effective as it facilitates the use of various applications such as 'Whatsapp', 'Zoom' and 'Google Classroom'. However, Wildana et al. also concur that internet access and internet packages restrict the effectiveness of online learning. A study by Muhammad and Kainat (2020) found that internet access problems, a lack of interaction between teachers and students and a lack of technological facilities challenge the efficacy of online learning. According to a study conducted by Hazwani et al. (2017), an institution's infrastructure plays a significant role in ensuring that online learning operates successfully. Poor infrastructure will limit students' ability to access the internet.

Students' attitudes also influence the effectiveness of online learning. Students who approach online learning carelessly present a challenge that all stakeholders should work to overcome (Hazwani et al., 2017). This is supported by Nurul Haidah et al. (2020), as they assert that students should take the opportunity to learn, improve their interpersonal skills, and enhance their adaptability to new technologies.

In the light of the aforementioned studies, online learning is effective in certain places. However, obstacles and challenges in the implementation of online learning remain. Among these, poor internet access in schools, campuses and residential areas, the cost of internet packages, issues with technological facilities, and students' attitudes are highlighted. To address them, existing infrastructures should be upgraded to enhance the effectiveness of online learning for students. Therefore, all stakeholders, particularly educators and students, need to adapt to this new norm. This adaptability is defined by the capacity to transform current behaviour in response to a new situation (Nurul Haidah et al., 2020). In other words, whether they want to or not, educators and students should strive to increase their knowledge of technology to manage their studies effectively. This is particularly important as part of learning new technological approaches to education.

In response to these issues, this study assesses the effectiveness of online learning and considers the challenges that it presents to pupils' abilities to learn.

2. Literature Review

2.1 COVID-19

The novel coronavirus (COVID-19) attacks the immune system and can cause death. The rapid spread of the virus can also cause people to suffer from anxiety which, in turn, can lead to psychosocial impacts, such as shortness of breath and dizziness (Tarista, 2020).

2.2 Online Learning

Online learning (e-learning) describes any form of pedagogy delivered using digital technology. Such methods incorporate visual graphics, text, animations, videos and audio. In addition, online pedagogy can also facilitate group learning, and the assistance of instructors within specific fields (Wan Aziaris, 2015).

For the purpose of this study, online learning is defined as a teaching and learning process between teachers and pupils that involves various digital mediums, such as 'Whatsapp', 'Zoom', and 'Google Classroom'. In addition, online learning does not refer to direct learning alone. Any assignments or activities, provided by the teacher online, are considered part of online learning.

According to Ratheeswari (2018), in the digital age, the use of Information and Communications Technology (ICT) allows students to learn and apply the skills that they need in the 21st Century. Furthermore, online learning is the best medium by which to ensure the continuity of students' learning during the COVID-19 pandemic (Ariffin et al., 2020; Fauziana, 2020; Mansor et al., 2021; Raheim, 2020; Samat et al., 2020). According to Pusvyta Sari (2015), online learning is an alternative pedagogy for the era of technological development and communication, and students in particular need to adapt.

Mat Dawi et al. (2016) found that, in the midst of globalisation and the advancement of ICT, technology-based and online learning is highly encouraged. The management of pedagogical processes should be conducted creatively and undergo innovation to facilitate interaction between teachers and students. By interacting online, instructors and educators remain connected with their students notwithstanding being in different locations (Hussin, 2017). Technology-based teaching and learning techniques should be applied within schools and universities by public or private agencies. These methods should be implemented in accordance with the requirements of digital learning, and participants should experience constant interaction without the need for face-to-face communication (Duff, 2008). Various educational technology should be employed to ensure that students feel excited to learn, and to resolve any discrepancies between the consistency of students' learning experiences online, as opposed to face-to-face.

Interactive online learning allows students to uncover new information by exploring digital libraries and websites. As further technologies are introduced to the field of education, distance learning facilitates the global dissemination of information and knowledge (Hasifah, 2020). She contends that online learning is important because it can enable more effective self-learning. Students can choose the time they spend, the content they learn, and the direction of their learning. Students also have the opportunity to revisit challenging topics until they feel confident in their understanding. Furthermore, online learning allows students to study in a "safe" environment, without experiencing embarrassment about asking questions.

According to Harrison (2018), young children can access pictures and videos, navigate 'Youtube', and interact and participate in games and digital applications that are suited to their age. Generations Y and Z evidently possess the greatest experience of ICT facilities, thereby making it easier for these groups to utilise online learning. According to Fauziana (2020), students can revisit their lessons by re-watching recordings made by the educator, and obtain information from books or using the internet to strengthen their knowledge. Educators and students can also conduct bilateral communication, as messages can be exchanged during a lecture using the meeting software's chat column, 'Whatsapp', 'Telegram', video calls or phone calls. Students can also review their lessons using Education TV on DIdikTV channels. This is particularly useful for students expecting to take the following examinations: the Form 5 Malaysia Certificate of Education (SPM), the Form 3 Assessment Test (PT3) and the Standard 6 Primary School Assessment Test (UPSR).

2.3 Theory of Planned Behaviour

The Theory of Planned Behaviour as described by Ajzen (2002) explains the relationship between beliefs and behaviour intention. This theory has been widely adopted in explaining how behaviour is developed in various fields including education (Barnard-Bark, Burley & Crooks, 2010).

Attitude, perceived behavioural control and subjective norm are among influential factors that lead to behavioural intentions. Generally, attitude refers to personal encounters or experiences that lead

an individual to perform a specific behaviour intention (Datnow, 2020). Pasani, Amelia and Hassan (2020) asserted that attitude towards the use of technology in learning plays a pivotal part in developing acceptance to use the technology. Undeniably, the shift from face-to-face to online learning has provided students with personal experiences in using technology as a learning platform during the pandemic. Thus, their attitude might lead to behaviour intention to use technology for learning.

On the other hand, perceived behavioural control refers to one's view and perception of their ability to conduct or act in certain behaviour. In the context of technology acceptance, Davis (1989) explains that perceived ease to use and perceived usefulness are the factors that lead the integration of technology in enhancing organizational performances. If students found that the technology is easy to be used or useful in helping them to learn, this will lead to the development of perceived behavioural control.

Whereas, subjective norm refers to an individual's perspective on a certain behaviour that is determined by the opinions of others. Thus, the subjective norm is shaped by their surroundings or social environment. In relation to the use of online learning, subjective norm plays an important part in determining behavioural intention. However, there are a number of research that argue the relationship between surroundings and behaviour intention to use technology. For instance, Eksail and Afari (2020) and Shiue (2007) agreed that one's surroundings have a minimal impact on intention to use technology.

In the context of online learning, the aforementioned factors play an important part in shaping students' intention and acceptance to use technology in their learning. If students have a positive attitude, perceived behavioural control and are in encouraging surroundings, the intention to utilize technology to the fullest will definitely contribute to effective and meaningful learning.

2.4 Pupils' Perspective on Online Learning

Behaviour is strongly influenced by an individual's attitudes. Positive attitudes result in positive behaviour and negative attitudes always cause negative behaviour (Hazwani et al., 2020). This observation corresponds with the nature of students' engagement with e-learning (online learning). Several studies have highlighted the challenges and opportunities associated with e-learning during the pandemic (Mailizar et al., 2020). Researchers endeavour to understand the benefits and obstacles that various stakeholders involved in e-learning have experienced. Based on the work of Mailizar et al. (2020), the student's voice is a significant consideration in this context. Therefore, further research is necessary to identify the challenges that restrict students' abilities to achieve their goals.

Hazwani et al. (2017) have concluded that students' attitudes influence the effectiveness of e-learning. Accordingly, students that are optimistic and enthusiastic will not experience e-learning as an obstacle to their academic success. Adnan (2020) found that students felt that conventional learning differed greatly from online learning. Furthermore, students felt that face-to-face learning is crucial for effective learning, and that group assignments are difficult to complete online.

According to Hazwani et al. (2020), not all students and organisations enjoy e-learning. To ensure that e-learning can be used extensively, independently, and to the greatest effect, it is important to identify which factors affect its use. E-learning also demands that users be more self-motivated to learn. The findings of the previous study are supported by Surjono et al. (2015), who state that e-learning can produce a flexible and distributed learning system. Students will be able to choose the time and location in which they study because they are not required to attend a certain place at a specific time. Distributed learning describes a process whereby instructors, students and learning materials are located in different areas so that students can learn the level of time and place limitations.

2.5 Challenges Affecting Online Learning

According to Wildana et al. (2020), the online learning models used during the COVID-19 pandemic equipped students with knowledge in a similar way to face-to-face learning. However, online learning provides more experience will be the importance of process learning that balances the development of time and technology based on self-regulatory capabilities, which is definitely owned by each student. According to Wildana et al. (2020), the regulations enforced by the head of an educational institution are most important when delivering online learning.

The availability of the internet and the cost of internet packages determine the continuity of online learning. However, in practice, this study found that students experienced limited internet access because of their geographical location, or as a result of limited finances with which to purchase internet packages. Students' level of literacy, and their ability to access online learning, is also crucial to the effectiveness of online learning. Hazwani et al. (2020) found that internet connection was the most significant factor to influence the effectiveness of e-learning. Hazwani et al. (2020) contend that management personnel need to improve dormitory areas to provide all students with access to the internet. Internet connection must be moderate or good in order to suffice.

Moreover, students need to experience modern technologies in order to adapt to current circumstances. Never using this application does not mean not having to take note of technology. Students should familiarise themselves with various online applications so that their knowledge is up-to-date. Digital technology is extremely useful and benefits students that use it in a positive way (Hamimi, 2018). The spread of COVID-19 has triggered the development of new pedagogical models and online learning applications to facilitate the achievement of learning goals (Schneider & Council, 2020). In response, innovation in the field of education should continue to ensure that this development does not cease (Verawardina et al., 2020).

According to Nurul Haidah et al. (2020), students keep pace with social change by adapting to the availability of new technologies. This adaptation is crucial, as modern life is embedded in technology. Once these skills have been attained, students are able to adapt regardless of their circumstances and respond to the emergence of new or familiar problems. Consequently, students will possess a variety of technology skills that they can apply in the future. This initiative has encouraged the use of ICT and social media applications as an important platform to help teenagers and students engage in remote learning. These initiatives and recommendations prioritise students that will take important examinations, such as the SPM, PT3 and UPSR, which impact the instructions introduced during the CMCO. However, the existence of social media and modern communication applications still allows teachers to direct students' online learning experiences (Nor Shela & Mohd Shafi 2020).

3. Methodology

3.1 Study Design

This study employs a case study design because it is relevant in collecting rich data and information on a specific event that affect how individuals react and change their behaviour (Chua, 2020). Since the sudden change in teaching and learning delivery during the Conditional Movement Control Order (CMCO), this situation might affect how they react and change their behaviour in the online learning settings. In fact, this situation is still new and little evidence is available on its effectiveness. Therefore, in this study, in order to examine the effectiveness of online learning and the challenges that it presents to pupils' abilities to learn, a survey questionnaire has been utilized.

According to Chua (2020), a survey questionnaire is helpful to provide direct information from the respondents on their personal encounters, experiences and perception of an issue. A five-point Likert scale questionnaire that consists of two aspects: a) investigating students' perceptions about the effectiveness of online learning, and b) the challenges related to their online learning facilities, was designed and distributed with the support of the class teacher.

A total of 99 pupils, aged 15-16, from a single secondary school in Jasin, Melaka were selected using the convenience sampling technique. This is because this study is not aimed at testing a research hypothesis to be generalized to the population but to develop an understanding (Chua, 2020) of students' perceptions about the effectiveness of online learning, and the challenges related to their online learning facilities. In this study, from a total of 99 pupils, 63 respondents were female and 36 were male. All of the respondents were receiving full-time online learning due to the CMCO that was re-implemented from 9 November 2020 until 6 December 2020.

3.2 Data Analysis

The responses from the survey were analysed by calculating the percentage and frequency using Microsoft Excel software. Since this study identified frequency and percentage for each item in the questionnaire, the interpretation of these findings was based on Nurul and Suziyani's (2018) suggestion for percentage score interpretation. As presented in Table 1, if an item achieved a percentage score between 0% and 49%, the level of agreement on the item statement was considered as low. Based on the standard norm, a 50% score is considered a mean score, while a score of 75% or above is considered to be within the highest quartile (Azriah et al., 2019).

Table 1. Interpretation of percentage scores.

Percentage score	Score interpretation
75% to 100%	High
54% to 74%	Moderate
0% to 49%	Low

Source: Nurul & Suziyani (2018)

4. Findings

Of the 99 respondents, 52.1% were aged 15-16 (n = 51), and 47.9% (n = 48) were aged 16-17. Furthermore, 39.8% of students (n = 39) were from rural areas, while 60.2% (n = 61) lived in urban areas.

4.1 Students' perceptions about the effectiveness of online learning

Table 2 provides a summary of students' responses on the effectiveness of online learning. It was found that 92.9% (n=92) of the respondents agreed (moderately agree; agree; strongly agree) that they felt comfortable and eligible to use electronic devices for online learning. Also, it was found that they highly agreed that (93.9%, n=93) they were comfortable using electronic communication equipment.

Table 2. Pupils' Perspectives of Online Learning

No.	Item	Frequency					Total of agreement (MA, A and SA)	Interpretation
		SD	**D**	**MA**	**A**	**SA**		
1.	I feel I am eligible to use the computer.	2 (2.0%)	4 (4.0%)	26 (26.3%)	38 (38.4%)	28 (28.3%)	92 (92.9%)	High
2.	I am comfortable using electronic communication equipment.	1 (1.0%)	4 (4.1%)	24 (24.2%)	33 (33.3%)	36 (36.4%)	93 (93.9%)	High
3.	Effectiveness – there is no difference between online	28 (28.3%)	33 (33.3%)	25 (25.3%)	9 (9.1%)	4 (4.0%)	38 (38.4%)	Low

No.	Item	Frequency					Total of agreement (MA, A and SA)	Interpretation
		SD	**D**	**MA**	**A**	**SA**		
	learning and conventional learning.							
4.	I am motivated when using online learning compared with conventional learning.	24 (24.2%)	34 (34.3%)	31 (31.3%)	8 (8.1%)	2 (2.1%)	41 (41.5%)	Low
5.	I can complete group assignments using online learning.	12 (12.1%)	21 (21.2%)	36 (36.4%)	22 (22.2%)	8 (8.1%)	66 (66.7%)	Average
6.	Conventional or face-to-face learning with teachers is important.	2 (2.0%)	0 (0%)	8 (8.1%)	27 (27.3%)	62 (62.6%)	97 (98.0%)	High

*SD=Strongly Disagree; D=Disagree; MA=Moderately Agree; A=Agree; SA=Strongly Agree

However, in terms of effectiveness, the respondents expressed that conventional learning (face-to-face) is highly important (98%, n=97). Interestingly, 98% of respondents (n=97) felt that learning face-to-face is more effective than online learning. It was also found that they disagreed with the statement: there is no difference between online learning and conventional learning, in terms of its effectiveness. This is because the level of agreement was found to be low (38.4%, n=38)

In addition, the data suggested that only 41.5% (n=41) of the respondents felt motivated by online learning. This demonstrates the ineffectiveness of online learning compared with conventional classroom learning. In terms of their ability to complete group assignments using online learning, the level of agreement was moderate (66.7%, n=66).

4.2 Respondents' online learning facilities: The challenges

To learn online, respondents must have the correct facilities – namely a smartphone, computer device and internet access. This is the first challenge to solve in order to facilitate online learning.

Table 3 presents information about the online learning facilities that respondents owned. The data indicate that 93.9% of respondents (n=93) had internet access, which is good, but that 61.1% (n=61) had a limited internet connection or a weak signal. This is likely to be due to the level of infrastructure. Meanwhile, 14.7% of participants (n=14) had limited internet access due to its cost, and they could not afford a stronger or more stable internet connection.

Table 3. Online Learning Facilities

No.	Item	Frequency	Total	Interpretation
Online learning challenges: internet access at home.				
1.	Broadband Internet line	30 (30.6%)	93 (93.9%)	High
2.	Smartphone Internet data line	63 (63.3%)		
3.	None	6 (6.1%)	6 (6.1%)	Low
Online learning challenges: computer facilities.				
4.	My own	29 (29.3%)	77 (77.8%)	High
5.	Use with Family	48 (48.5%)		
6.	None	22 (22.2%)	22 (22.2%)	Low
Online learning challenges: smartphone facilities.				
7.	My Own	77 (77.8%)	97 (98%)	High
8.	Use with family	20 (20.2%)		
9.	None	2 (2.0%)	2 (2.0%)	Low
Online learning challenges: I get limited internet access for the following reasons.				
10.	High financial cost	14 (14.7%)	14 (14.7%)	Low
11.	Signal problems/internet access limitations	61 (61.1%)	61 (61.1%)	Moderate
12.	Other reasons	24 (24.2%)	24 (24.2%)	Low

The data also indicate that 6.1% of students (n=6) did not have internet access at home, and 22.2% (n=22) did not have computer facilities at home. Only 29.3% (n=29) had their own personal computer and 48.5% (n=48) shared technology with family members. Most respondents had their own smartphone device (77.8%, n=77), while 20.2% (n=20) shared smartphones with their family (parents or siblings). By contrast, only 2% (n=2) of participants did not have smartphones, but the majority were likely to use computers for online learning.

Within the data concerning the infrastructural challenges, the majority of respondents aged 15-17 owned either a smartphone or a personal computer at home. This enabled them to undertake online learning. However, they did experience limited internet access at home due to connectivity problems (61.1%; n=61). This is largely the result of infrastructural layout – a factor which students are unable to control or address.

5. Discussion

The majority of respondents expressed that they were qualified, confident and comfortable using computers, and electronic communications equipment (such as smartphones), during their online learning sessions. As explained in the Theory of Planned Behaviour, Ajzen (2002) justified that perceived behavioural control which is contributed by the perceived ease to use and perceived usefulness (Davis, 1989) have helped to develop a sense of confidence and comfort for these students

to use the electronic communication equipment. Undeniably, the sudden closure of the school and the implementation of online learning has provided personal experiences and encounters that shaped their attitudes towards online learning. The familiarity with the gadgets and computers among these students might be the reason why they felt comfortable and easy to learn via the online platforms. Samat et al. (2020) supported that the readily available online platforms that encourage social learning is found beneficial to enhance learning engagement between teachers and students, and students to students (Samat et al., 2020). Thus, this will create a positive learning environment for students.

Even though a number of students shared the gadgets with their siblings and/or other family members, they were still able to adapt and learn. Again, the exposure and familiarity to the gadgets from their surroundings have helped to shape their behaviour to use the electronic communication equipment for learning (Ajzen, 2002). As a result, the students were still able to participate and develop their knowledge and skills in using technology for online learning.

On the other hand, even though online learning is found as a suitable method of learning in this current situation (Ariffin et al., 2020; Duff, 2008; Hussin, 2017; Pusvyta Sari, 2015; Raheim, 2020; Samat et al., 2020), the findings indicated that only a small percentage of respondents felt they benefitted from online learning, and agreed that online learning did not motivate them to enjoy learning. Instead, they preferred conventional classroom methods. Hazwani et al. (2020) similarly found that students' motivation during online learning was low as this learning required students to be self-motivated and independent in their learning. In Samat et al.'s (2020) study, they found that intrinsic motivation is a predictor of student's intention to use online learning. Therefore, teachers should play an important role in designing learning that is engaging and interesting for students.

Interestingly, the current study has uncovered that students' learning was affected by limited internet access because of poor infrastructure and the high costs of internet packages. Most respondents noted that they did not have stable internet access and were unable to participate in class without disruptions. We believe that respondents' place of residence (urban vs. rural) may explain some of these issues, as almost 40% of respondents live in rural areas. Facilitating conditions are undoubtedly pivotal to students' learning motivation (Rahiem, 2020; Samat et al., 2020). With such challenges faced by these students, it was not surprising that their learning motivation was found to be 'low'.

Furthermore, Adnan (2020) and Hazwani et al. (2020) claimed that online learning is still new and unfavourable among students. Other than poor facilities at home, the unfamiliar learning environment such as 'different' learning activities and tasks that were new to the students might have affected their motivation to learn. As the tasks need to be completed online, they might feel that most of the tasks, such as group discussions, and assignments were challenging to be completed (Rahiem, 2020). These personal encounters affect how they perceived their learning.

5.1 Addressing the challenges

In addition to ongoing technical and financial issues, online learning can be ineffective due to a lack of interaction between pupils and teachers and the absence of social relationships between pupils and teachers, and among pupils themselves, compared with conventional classes. This lack of social interaction has made it difficult for pupils to conduct group work virtually (Adnan, 2020; Hazwani et al.,2020). The lack of social interaction might also decrease learning motivation. Therefore, teachers need to improve their pedagogical methods and improvise aspects of the curriculum, to render it suitable for online learning.

Various ICT devices and internet packages are available at an affordable cost. Parents can choose their preferred package depending on their budget. With the widespread availability of mobile phones, computers, laptops, tablets, and other devices, and their increasingly accessible and user-friendly interface displays, more students and parents should be able to access the internet in their local area (Fauziana, 2020). Government bodies and telecom companies must also take the lead to ensure internet access across the country, and thereby provide high-quality learning experiences for every student.

6. Conclusion

In conclusion, COVID-19 is impacting the pedagogical methods of academic institutions around the world. Schools, colleges, and universities are forced to conduct lectures and classes online, as an alternative method by which to continue students' learning. While online learning has been proven to support the health of students during the pandemic, it is not as effective as conventional learning. Additionally, the lack of a robust online infrastructure may impede the effectiveness of online learning. Teachers must improve students' experience of online learning by utilising effective pedagogical methods. Concurrently, the government must take responsibility and improve the existing online infrastructure and facilities. Nevertheless, support within school communities, and among parents and school administrators, is vital to ensure the success of online learning.

7. References

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied 425 Social Psychology, 32(4),* 665.

Ariffin, K, Halim, N. A., & Darus, N. A. (2020). Discovering Students' Strategies in Learning English Online. *Asian Journal of University Education (AJUE), 17(1),* 261-268.

Berita Nasional. (17 March 2020). *Kronologi Covid-19 di Malaysia*. Berita Nasional. Dilayari di laman www.bharian.com.my pada 28 Oktober 2020.

Barnard-Bark, L.; Burley, H.; Crooks, S.M. (2010). Explaining youth mentoring behavior using theory of planned behavior perspective. *International Journal of Adolescence and Youth, 15,* 365–379.

Bernard, R. M., Lou, Y., Abrami, P. C., Wozney, L., Borokhovski, E., Wallet, P. A. (2003). How does distance education compare to classroom instruction? A meta-analysis of the empirical literature. *Paper presented at the annual meeting of the Association for Educational Communication and Technology*, Anaheim, CA.

Datnow, A. (2020). The role of teachers in educational reform: A 20-year perspective. *Journal of Educational Change, 21(1),* 109–113.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly, 13(3),* 319–339.

Eksail, F.A.A., Afari, E. (2020). Factors affecting trainee teachers' intention to use technology: A structural equation modeling approach. *Education and Information Technologies, 25,* 2681–2697.

Harrison E. and McTavish, M. (2018). 'i'Babies: Infants' And Toddlers' Emergent Language And Literacy in a Digital Culture of Idevices. *Journal of Early Childhood Literacy 18,* 163-188.

Hasifah Binti Abdul, A. (2020). *Keberkesanan Pembelajaran Menggunakan Forum Dalam Sistem E-Learning: Kajian Kes Pelajar Tahun 4spi.* Johor. Penerbit Universiti Teknologi Malaysia.

Hazwani Mohd N., Noor Raudhiah Abu B. and Norziah O. (2020). E-Pembelajaran Dalam Kalangan Pelajar Di Sebuah Institusi Pengajian Tinggi Selangor. Selangor. Malaysian atas talian. *Journal of Education.*

Hussin, N. (2017). Penggunaan Laman Web Sebagai Transformasi dalam Pengajaran dan Pembelajaran Pendidikan Islam. O-JIE: atas talian. *Journal of Islamic Education, 1(2).*

Irfan, F. and Iman Hermawan Sastra, K. (2020). Teachers Elementary School in atas talian Learning of COVID-19 Pandemic Conditions. Jakarta. *Jurnal Iqra'.*

Mailizar Almanthari, A., Maulina, S., and Bruce, S. (2020). Secondary School Mathematics Teachers' Views On E-Learning Implementation Barriers During the Covid-19 Pandemic: The Case of Indonesia. *Eurasia Journal of Mathematics, Science and Technology Education, 16(7)*, em1860.

Mansor, A. N., Zabarani, N. H., Jamaludin, K. A., Mohd Nor, M. Y., Alias, B. S., & Mansor, A. Z. (2021). Home-Based Learning (HBL) Teacher Readiness Scale: Instrument Development and Demographic Analysis. *Sustainability, 13(4)*, 2228. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su13042228

Mat Dawi, A.H., Theam, L. S., Palaniandy, M. and Dolah, J. (2016). Penerimaan Alat Web 2.0 dalam Pelaksanaan Kurikulum Program Berasaskan Pembelajaran Abad Ke-21 di Institut Pendidikan Guru. *Jurnal Penyelidikan Dedikasi, 10.*

MKN. (18 March 2020). *Kenyataan Media MKN: Perincian Perintah Kawalan Pergerakan. Majlis Keselamatan Negara, Jabatan Perdana Menteri*. Dilayari di laman www.pmo.gov.my pada 28 Oktober 2020.

ResearchGate

See discussions, stats, and author profiles for this publication at: https://www.researchgate.net/publication/371221494

Parent Involvement with Their Children's Schools: Perceptions of Saudi Parents of Elementary School Students with Learning Disabilities

Article *in* Learning Disabilities Research and Practice · March 2023

DOI: 10.1111/ldrp.12304

CITATIONS
2

READS
117

2 authors, including:

Todd K Shackelford
Oakland University
595 PUBLICATIONS **20,276** CITATIONS

SEE PROFILE

All content following this page was uploaded by Todd K Shackelford on 08 June 2023.

The user has requested enhancement of the downloaded file.

Check for updates

Learning Disabilities Research & Practice, *38*(2), 144–154
© 2023 The Division for Learning Disabilities of the Council for Exceptional Children.
DOI: 10.1111/ldrp.12304

Parent Involvement with Their Children's Schools: Perceptions of Saudi Parents of Elementary School Students with Learning Disabilities

Mohaned G. Abed
King Abdulaziz University
Todd K. Shackelford
Oakland University

This exploratory, qualitative study investigated the perceptions of Saudi Arabian parents of elementary school-aged children with learning disabilities with regard to their involvement in their children's education. Guided by results of previous research conducted primarily with Western samples, and using a semistructured interview methodology followed by thematic phenomenological analyses, specific interview topics included parental perceptions of (a) the importance of parent–school partnerships, (b) the means of encouraging a parent–school relationship, and (c) how school practices may affect parental participation. The study involved 13 parents of children in elementary education (ages 7–12 years) diagnosed with learning disabilities. The results suggest several ways to overcome the involvement barriers reported by parents.

LEARNING DISABILITIES
RESEARCH & PRACTICE

Parents are the primary caregivers of their children and typically have intimate knowledge about them. Parents, therefore, are in a good position to provide information that can assist educators in better assessing and understanding their pupils and facilitate connections between learning at home and learning in the classroom. Furthermore, when parents participate in school activities, they can connect with other families with children attending the same school. Additionally, parents can help a school improve its academic programs as well as its educational and social climate. Given the important role parents can play, maintaining successful parent–school relationships can increase the likelihood that that school successfully develops children's potential (Avnet et al., 2019; Epstein, 2010; Starr & Foy, 2012). This is important for all children but for children with special needs, in particular.

Parental Involvement in Education

The relationship between the school and parents is important, as evidenced by growing attention in the last few decades from researchers and practitioners in different fields, including psychology, sociology, and education (e.g., Harris & Goodall, 2008). Thus, a review of the literature reveals a broad range of studies, such as Hsiao (2016), focusing on parents' perceptions about their involvement in schools and home/school learning. However, a search for research in this domain specific to the Saudi Arabian context shows a severe lack of studies addressing parental perceptions about their involvement in special education programs and schools (see Poon et al., 2013). This is a concerning observation for the Saudi educational context because schools on their own are not able to address the many challenges experienced by learners, especially learners with special needs.

Research has identified many benefits of collaboration between parents and the school. For instance, Kyriakides (2005) concluded that parental involvement strengthens children's learning. Furthermore, greater parental involvement with the school predicts reduced student absenteeism, increased student retention, and positive achievement in numeracy and literacy, together with improvements in classroom management of student behavior (Barger et al., 2019; Smith et al., 2019). Based on the results of such research, educational departments are developing models that involve partnerships between schools and parents aimed at improving learning outcomes for all learners, but especially for students with disabilities (Porter, 2008).

Parental Involvement in Special Education

Developments over the last few decades reflect a move away from a medical model of learning disability to a social model (Barnes, 2019). This has resulted in greater appreciation of the needs of families of children with learning disabilities and increased efforts to facilitate an environment in which parents participate in planning, delivering, and assessing the programs available to students. This is in keeping with the views of Porter (2008), for example, who argued that the most effective way to meet the needs of children is to involve parents. Specifically, this approach to intervention services seeks to assist families in accessing and influencing

Requests for reprints should be sent to T. K. Shackelford. Electronic inquiries should be sent to shackelf@oakland.edu.

services instead of waiting passively for services to be delivered (Carpenter, 2007). Thus, the development and implementation of a family-centered approach to special education, especially with elementary school-aged students with disabilities, provides parents with strategies for becoming effectively involved in their children's education by learning how to gain access to information and use of available resources (Espe-Sherwindt, 2008; Paseka & Schwab, 2020).

Engagement by parents in early intervention programs affords benefits to all children but is especially important for children who have learning disabilities, including the development of healthy attitudes towards their children's abilities, and in the process promoting family well-being (Jinnah & Walters, 2008; Yotyodying & Wild, 2019). This is a view acknowledged by Wall (2003), who suggested that when the partnerships between teachers, parents, and learners are strong, the resulting positive outcomes benefit not just the children but also teachers and parents.

Although the literature documents benefits of collaboration between the school and home, it also identifies barriers to parental involvement in educating learners with disabilities in the school environment (Al-Dababneh, 2018). For example, based on a qualitative study of parental perceptions, Wehman and Gilkerson (1999) found that the leading barriers to parental involvement included the limited times during which teachers are available to parents and inefficient communication between teachers and parents. A similar study by Lamb-Parker et al. (2001) focused on barriers to participation for mothers with children in a Head Start program. The researchers concluded that mothers encountered many and varied challenges that made it difficult for them to participate. For instance, 50% of the participating mothers reported frequent feelings of depression and frustration with their child's educational experiences, particularly in the early stages of the Head Start program.

Parental Involvement in Saudi Arabian Education

Saudi Arabian families in recent history have implicitly granted schools authority in decision-making with regard to their children's education (Alobaid, 2018). This can be attributed, at least in part, to Saudi culture, which encouraged parents not to question school administrators' and teachers' decisions. And as a result, the school system's structure did not expect, facilitate, or support parental involvement or collaboration with teachers and administrators (Alobaid, 2018).

Fortunately, things are beginning to change, and parental participation in children's education is an emerging topic in Saudi Arabia. The need for programs to facilitate and support parental involvement arose after a series of recent educational policy changes that afforded parent–teacher collaboration and cooperation (Alobaid, 2018). As a result, Saudi statutes now require schools to provide parents with opportunities to serve as equal partners with teachers and staff in their children's education (Alquraini, 2010; Ministry of Education of Saudi Arabia, 2002, 2008). Specifically, these statutes codify the importance of including parents as partners that can assist teachers in accomplishing goals in service to the child's academic success, and this applies with equal force to children with learning disabilities.

Unfortunately, parent involvement programs remain uncommon in present-day Saudi Arabia. The majority of Saudi parents lack awareness of the parent involvement programs offered by schools, which has resulted in continued limitation and restriction of parents' access to the school community and to resources for assisting and monitoring their children's educational and developmental progress (Alobaid, 2018).

Challenges to Sustainable and Effective School–Parent Partnerships

In this section, we address challenges to sustainable and effective school–parent partnerships, with reference to research conducted with Western populations. Unless otherwise noted, there is remarkably little comparable research with Middle Eastern populations, in general, and with Saudi populations, in particular. Part of the impetus for the current study was to begin to address this dearth of research.

An important challenge to the sustainability and effectiveness of school–parent partnerships is the lack of a uniform definition of "parental involvement." From a traditional perspective, parental involvement includes assisting children with homework, being involved with or volunteering in school activities, attending school events when invited, and maintaining communication with teachers (Bower & Griffin, 2011). However, some researchers include parenting practices and behaviors in their definition of parental involvement with children's education such as the importance of setting rules in the household related to education and parental aspirations for their children's academic achievement (Jeynes, 2005).

Teacher and administrator preparation is another challenge impacting effective school–parent partnerships (Epstein & Sanders, 2006). Many school leaders and teachers do not receive adequate training in educator preparation programs on organizing, conducting, and employing practical strategies to develop and maintain partnerships with parents (Epstein & Sanders, 2006). Additionally, they are often not provided with guidance on how to meet school mandates and educational policies requiring them to facilitate parental involvement, and neither are they provided with a clear sense of the desired outcomes.

As a result, although administrators and teachers often report that they are willing to involve parents in the school community, misperceptions and lack of preparation remain about how this can be accomplished, leaving many school leaders and teachers with the feeling that despite their efforts, parents are not engaged (Mapp & Kuttner, 2013).

A third challenge relates to the need for collaborative and trusting relationships (Harpaz & Grinshtain, 2020). For school–parent partnerships to succeed, relevant policy must be translated into action. Action requires the development of the school's capacity to encourage parents to be involved in school activities, for example. Hoover-Dempsey et al. (2005) identified strategies for developing a school's parental involvement capacity, including establishing an inviting and

15405826, 2023, 2, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ldrp.12304 by Oakland University Library, Wiley Online Library on [31/05/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

welcoming atmosphere, being conscious of parents' goals for their children's education, appreciating parents' perspectives on their children's culture and learning style, providing sufficient involvement opportunities, and investing consistent and systematic attention to improving parent–school relationships. If these strategies and conditions are in place, the result is a setting that more effectively encourages partnerships that benefit students from varying backgrounds (Hoover-Dempsey et al., 2005). According to Henderson and Mapp (2002), "When schools build partnerships with families that respond to their concerns and honor their contributions, they are successful in sustaining connections that are aimed at improving student achievement" (p. 7).

Research Questions Guiding the Current Study

The current study aimed to expand an understanding of the relationship between schools and parents. Given the dearth of research concerning parents' perceptions of parental involvement and partnerships with schools, our focus is on Saudi Arabian parents of elementary school-aged children with learning disabilities.

Specifically, we explored Saudi parents' perceptions of parental involvement to determine why some parents of elementary school-aged children with learning disabilities are involved in their children's education whereas others are not. The following questions guided the study: (a) What are parents' views on the importance of parent–school partnerships? (b) What are parents' views on the means that can be used to encourage and support a relationship between parents and the school? And (c) What are parents' views on how school practices around parental participation might affect that participation?

Rationale and Significance of the Study

In the educational context, partnership generally denotes the collaboration of parents and teachers to successfully attain the goals of education for children. The Plowden Report (United Kingdom Department of Education & Science, 1967) describes a partnership between parents and teachers as integral to education development. Indeed, establishing partnerships in education is important for governments, countries, and families. For instance, when families work with the schools, children learn more effectively, leading to higher academic achievement. In addition, governments often discover that schools that work closely with families are better accountable to the communities that provide them with funding and assist them in meeting the demands of parents (Kelley-Laine, 1998).

In the current study, "parental involvement" refers to the level of a parent's interest and active participation in their child's academic progress. Furthermore, we distinguish between school-based and at-home parental involvement. The former refers to the interface between parents and the school regarding the child's education that occurs in the school, such as attending parent and teacher association meetings, volunteering to help during class field trips, attending teacher–parent conferences, and active participation in other school activities. Parental involvement in the home context, on the other hand, refers to parental practices regarding the child's education outside the school. Examples include reading with the child, practicing academic skills with the child, talking to the child about issues related to the school, and assisting with homework (Hoover-Dempsey & Sandler, 2005).

METHODS

Design

This study used a qualitative design in which data were collected using semistructured interviews with Saudi Arabian parents of elementary school-aged children with learning disabilities. The qualitative design made it possible to explore and identify specific parental perceptions and to ask follow-up questions to provide clarity or to pursue specific elements about these parental perceptions (Creswell & Creswell, 2017).

To uncover the lived experiences of individuals, various educational studies conducted in the last four decades have utilized phenomenography—a research strategy that explores phenomena perceived by others, uncovering and explaining the variation therein, particularly in an academic setting (Cohen et al., 2011). Rooted in qualitative methodology, phenomenography employs human interaction to investigate the study question using specific methods such as interviews and observation. It is recognized that qualitative researchers inevitably introduce their personal viewpoints, belief systems, and biases to their research (Denzin & Lincoln, 2018). Therefore, this type of educational research must attend to the basic tenets of a research framework and the researcher's role in the study. Phenomenography is primarily concerned with describing conceptions, each depicting a unique experience of the phenomenon (Cohen et al., 2011). Consequently, the purpose of data analysis in phenomenographic research is to unearth variations in how the investigated phenomenon is encountered or experienced (Limberg, 2005).

Participants

Public elementary school directors throughout Jeddah, Saudi Arabia, were asked to encourage parents of elementary school-aged children with learning disabilities to participate in the study. In addition, they provided information about socioeconomic class, demographic, and geographic diversity of the sample. Thirteen parents agreed to participate. The demographic information available for the participants is displayed in Table 1.

Procedure

The senior author received approval from the research ethics board of his university to conduct the study. The directors of

15405826, 2023, 2, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ldrp.12304 by Oakland University Library, Wiley Online Library on [31/05/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1
Participant Demographics ($N = 13$)

Variable		*Frequency*
Gender of participant	Male	9
	Female	4
Age of participants (years)	30–40	5
	41–50	7
	51–60	1
Age of child (years)	7–8	3
	9–10	6
	11–12	4
Education qualification	Bachelor's	10
	Master's	3
Main student learning disability	Reading	9
	Writing	1
	Math	3

the participating schools assisted the researcher in identifying and enrolling participants. Parents expressing an interest in participating in the study were given an information letter describing the study and, subsequently, were encouraged to discuss the study with the researcher. Parents who agreed to participate signed a statement of informed consent prior to participating. Furthermore, before the interviews began, collaboration and permission were requested and obtained from the local education authorities for the schools that participated.

Semistructured interviews were chosen as they provide more flexibility to researchers than structured interviews. For example, they can be extended so that participants can include as much detail as they wish about their opinions and experiences. Semistructured interviews also incorporate some of the strengths of structured interviews, such as allowing for questions to be asked in an organized manner (Newby, 2014).

Interviews were conducted in person or by phone in a location convenient to the participant. Each interview lasted about 35 minutes and was guided by three questions: (a) As a parent, what is your view about the importance of school–parent partnerships? (b) What do you believe your responsibility is in the relationship between the school and home as a parent? And (c) What is your opinion about whether and how school practices encourage parental participation?

Reliability and Validity

In psychometric contexts, "reliability" refers to the applicability of the measured concept across participants. Thus, greater reliability is obtained if a similar study produces a similar pattern of results (Kvale & Brinkmann, 2009; Weinberg, 2002). In the current study, the researcher first invested time in developing trust and rapport with the participants, which facilitates engagement between the researcher and participant, with the result that participant responses are more reliable (Kvale & Brinkmann, 2009). We note that, during the interviews, the interaction between the participant and the researcher was kept professional by ensuring that the conversation was limited to the focus of the current research. When the interviews were transcribed, the researcher focused on and considered each word of the participant's response, with the text reread and listened to several times to minimize interpretive error.

Kvale and Brinkmann (2009) proposed that validity (i.e., the degree to which one is accurately assessing the intended variable) can and should be assessed repeatedly during the course of a study. Validity can be achieved to varying extents by ensuring that procedures and materials are subjected to questioning and control. According to Kvale and Brinkman, when considering validity, the focus is not on the outcomes or results. In the semistructured, qualitative interview context, the focus instead is on careful planning, designing, interviewing, transcribing, and data handling. For the current research, a pilot study was conducted to investigate the clarity of the interview questions, after which the questions were revised accordingly. Furthermore, in the main study, participants' responses were probed in a way that allowed for clarification, control, and validation. Generally, the interviews were conducted to ensure that the perceptions and attitudes of participants were portrayed and captured with accuracy.

To ensure the reliability and integrity of the study, we adhered to Brantlinger et al.'s (2005) guidelines for qualitative research in special education. Specifically, participants included diverse representatives of the target population, and the semistructured scripts were carefully crafted to be clear, open-ended, and suitable for exploring particular questions about social validity with various facilitators. To further ensure trustworthiness, data sources, including informal and formal field notes documented by the researcher, were triangulated with audio recordings and transcripts. Lastly, interview transcriptions were reviewed by independent experts in special education who confirmed that our study inferences were reasonable, based on their diverse experience (Brantlinger et al., 2005).

15405826, 2023, 2, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ldrp.12304 by Oakland University Library, Wiley Online Library on [31/05/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Analysis

When the interview process was complete, audio recordings of the participants' responses were transcribed and categorized. Fundamental to the process of categorizing the responses was the use of phenomenography, which provides researchers with a means to capture the varying ways in which the participant perceives the world (Weinberg, 2002). Based on the suggestions of Weinberg (2002), to categorize responses efficiently, the lead researcher and senior author read a specific response from a participant several times. Focusing attention on the transcribed text allowed the researcher to identify the underlying perceptions. The researcher identified, interpreted, and labeled the resulting categories using specific names.

The categorization process was followed by a process of condensing meaning so that the meanings obtained from the participants could be summarized, as proposed by Kvale and Brinkmann (2009). Based on insights from Hennink et al. (2015), after presentation of the main findings below, we attempted to create a balance with regard to presenting interpretative commentary and direct quotations from the interviewees.

Following the categorizations, significant statements and phrases about the phenomena of interest to the study were extracted from each transcribed interview. Then, from these statements, meanings were derived and considered themes. The themes were grouped into clusters and classified. Furthermore, categories and themes were highlighted using a color-coding system to facilitate analysis and formulate a description of the participants' lived experiences and recognize similarities and differences among them. The methodology utilized in this study required the researcher to constantly compare the data and the developing analysis. The analysis and interpretations were considered in light of the Saudi context (i.e., Islamic teachings and distinct social aspects of Saudi culture).

RESULTS

In the following, we present the findings related to the responses to the three research questions underlying the study.

Parental Perceptions of the Importance of School–Parent Partnerships

All participants highlighted the significant role played by partnerships between parents and the school in supporting children with learning disabilities and their responsibility to be involved. For example, Parent 4 stated, "There is an essential and reciprocal relationship between the home and school to support both parties. Central to this relationship is an atmosphere where the parents believe that their views are listened to, including what occurs in the parents' councils, which is essential. However, this may be more suitable in schools with ordinary learners as opposed to schools for learners with disabilities."

Parent 8 highlighted the importance of the school–parent partnership, stating that it is important to strengthen this relationship as it leads to better results in supporting the children's learning. Parent 10 added, "For children, learning happens not only in the school setting but also at home and outside the home. For this reason, the partnership between the school and the home can play a significant role in ensuring that children learn inside and outside the school."

Parent 3 referred to the importance of developing and maintaining a partnership between the school and parents for enhancing the abilities and skills of children. The same parent noted that, "It is helpful to bring the views [of parents and teachers] closer in the suitable teaching and pedagogical methods to support the student and to overcome any challenges in that."

Parental Perceptions of the Means to Encourage Parent–School Relationships

Most parents reported receiving occasional invitations to participate in school activities, events, and functions. The parents noted that there is more than one method that a school can adopt to identify the needs of parents and to provide them with opportunities to participate. Their suggestions included (a) inviting parents to take part in celebrations, programs, and activities (13/13 parents acknowledged such invitations); (b) regularly inviting parents of students with learning disabilities to assist in monitoring and managing their children's achievement and behavior (13/13); (c) activating parent councils and holding meetings each semester periodically (12/13); (d) implementing a system of homework notes so that parents can write notes to the teachers (10/13); and (e) involving parents and accepting their constructive opinions and suggestions (13/13).

Parental Perceptions of Challenges to Effective Parent–School Relationships

Participating parents noted several challenges related to establishing and maintaining partnerships between the school and home, including (a) parents' existing commitments (13/13); (b) the dates or times selected by the schools for meeting with parents being inconvenient for parents (8/13); (c) parent councils' focus on secondary matters that parents do not care about, which reduces their level of attendance (11/13); (d) lack of school/teacher awareness of positive impact of parent participation (9/13); and (e) disagreement between teachers and parents (8/13).

The views of many parents are represented by Parent 3's statement: "I find it surprising that schools still rely on traditional means of communication even though the world has moved on with technology and the use of faster means of communication such as WhatsApp groups and emails. However, teachers are not keen to significantly interact with these methods of communication. Maybe they are too busy as the school also has a private life and teachers are preoccupied with the requirements imposed on them."

15405826, 2023, 2, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ldrp.12304 by Oakland University Library, Wiley Online Library on [31/05/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Participating parents identified several additional challenges to developing and maintaining a successful partnership between the school and home. For example, Parent 7 said: "The main challenge I have with the school is that I am only permitted to visit on specific days and times, and teachers are often busy in meetings. Even though I may want to participate, I find that I am not entirely welcome." Many parents (9/13) agreed with this assessment and noted that many challenges preventing partnerships led them to be dissatisfied with these partnerships. For example, Parent 5 mentioned that he is considering transferring his son to a private school from a public school because the former may be more interested in communicating, partnering, and recognizing parental participation. Most parents (11/13) agreed with Parent 11, who said: "I propose that it is essential to train teachers concerning managing partnerships with the home and how to get the buy-in of parents to the process of education and the interests of the parents and students."

DISCUSSION

This study explored parents' perceptions about their involvement in their children's education, with a focus on Saudi Arabian parents whose children attend public elementary school and have learning disabilities. Previous studies have concluded that parental participation is important for facilitating successful academic outcomes (Lynch et al., 2006). In environments in which parents perceive that they have an active role in helping their children succeed in school and that their efforts will have a positive impact, parents are more likely to become involved despite obstacles and challenges (Hoover-Dempsey et al., 2005, 2010).

In what follows, we discuss the results of the current study and situate our findings within the relevant literature. As noted earlier, the vast majority of the literature on parental involvement consists of research conducted with Western populations. Unless we note otherwise, very little comparable research has been conducted with Middle Eastern populations, in general, and with Saudi populations, in particular.

Benefits of Parental Involvement in Education in General

Castro et al. (2004), Wilson-Jones (2003), and McBride et al. (2005) found that when parents are willing to participate in their children's education and their communication with the school comes from attending parent councils and following up with teachers, their involvement in attending school events, reviewing assignments, and monitoring their children's academic development increases. The same scholars note that greater parental school involvement increases children's motivation and encourages them to value academic performance.

In addition, numerous studies have demonstrated that positive communication between teachers and parents improves students' academic performance (Epstein, 2001, 2010; Leenders et al., 2019). This is based on the assumption that for children to understand their world, their personality and needs, including behavior and challenges, should be considered. The purpose of an ongoing relationship between a child's parents and teachers is to integrate and coordinate functions between the school and parents to achieve desired educational objectives (Epstein, 2001, 2010; Neuenschwander, 2020). A healthy parent–teacher relationship is expected to facilitate effective education, pedagogy, and well-being. Establishing trust between parents and teachers affords teachers greater opportunity to understand the child's environment and how to interact with them most effectively. Also, establishing trust between parents and teachers ensures that the parent can understand and support the teacher's approach. The communication process should be bidirectional, in which the teacher provides information to the parent about the child's behavior or performance in the classroom, and the parent provides information to the teacher about the child's interests, inclinations, personality, and schoolwork performance at home (Boit, 2020; Epstein, 2001, 2010). Communication between parents and teachers can occur through school visits, open house, phone calls, letters, and notes.

Parental Involvement in Special Education

Some parents of children with learning disabilities worry about their children's well-being but fail to provide them with appropriate care and support (Salem, 2014). For example, parents who are overprotective may have unreasonable expectations of the child and teachers. In addition, parental overprotection can reduce the child's confidence, making learning more challenging. Parents' lack of interest in communicating with teachers, lack of participation in educational activities, and unwillingness to cooperate in the ongoing review of their children is cited by Salem (2014) as among the most significant problems that impede the educational process. We next discuss implications of parental involvement for student learning and educational achievement.

Learning and Educational Achievement

The educational achievement of children with learning disabilities is influenced by the attitudes and assistance they receive from educational institutions, teachers, specialists, and parents. Hornstra et al. (2010) noted that children with learning disabilities can be affected by parents, teachers, and fellow students with whom they interact. These interactions can either be negative or positive.

The presence of a child with learning difficulties in a family influences the attitudes of the parents and can place much stress on the parents and affect interactions between family members (Dyson, 1996). Educating parents about their child's learning disabilities may positively affect their attitudes. Previous research has demonstrated that if counseling programs are made available to parents and other family members regarding learning disabilities, support from these other family members often increases, as demonstrated in their communication with educational institutions caring for

15405826, 2023, 2, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ldrp.12304 by Oakland University Library, Wiley Online Library on [31/05/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

children with disabilities. All of these factors may help to shift parents' attitudes toward their children with learning disabilities from negative to positive, improving these children's experiences in the school, in their family, and in society, with other children and adults.

Parental Responsibility and Expectations

Strong agreement was found among the parents participating in the current research that it is their responsibility to be involved in their children's education. Consistent with findings from previous studies such as Hoover-Dempsey et al. (2005), most parents agreed that it is their responsibility to know how their children are progressing in school. Such findings differ from previous and more dated literature reviews, such as that of Kay et al. (1994), which concluded that parents of children with learning disabilities were unsure of their responsibilities and indicated they needed more information from teachers about what was expected of them.

Parental Beliefs, Values, and Culture

Parental beliefs, values, and culture can affect the success of efforts to develop and maintain partnerships between home and school (Murray et al., 2014). This view is supported by responses of participants in the current study. From the participants' responses, it is clear that they have strong opinions that shape how they participate in partnerships with the schools. They share the belief that their role in the partnership between the home and school is to support at home the learning that occurs in the classroom. Such beliefs led parents to assist their children with their homework, for example, with the expectation that this would result in positive academic outcomes for their children.

Such responses are in keeping with conclusions of previous studies, including that parental participation led to better academic achievement, attendance, and behavior (Gordon & Louis, 2012; Kinkead-Clark, 2017). Being able to assist their children at home was an essential part of how parents experienced the partnership between the home and school as positive. This also highlights strong beliefs among parents regarding their ability to have a desirable impact on the educational achievement of their children. Referred to in the home-school partnership literature as "parental self-efficacy" (Green et al., 2007; Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005, 2010), such beliefs constitute motivational elements in the decision by parents be involved in the activities of their children's schools (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey & Whitaker, 2010; Hoover-Dempsey et al., 2005; Hoover-Dempsey, et al., 1995).

Based on the findings of a qualitative study, John-Akinola and Gabhainn (2014) offered suggestions for how parents can effectively participate in the activities of their children's schools. For example, the researchers recommended that schools focus on developing partnerships with parents by making it easier for them to participate in daily school activities. Numerous motivational factors may impact a parent's decision to get involved in school or home activities related to learning (Sheldon, 2002). In addressing Research Question 2 of the current study, the aim was to investigate connections between parental perceptions regarding school communication and the degree to which parents were involved in their children's education. Participating parents indicated that if teachers attempted to invite them to participate in their children's schooling, such invitations were sometimes limited in scope.

Teacher and School Encouragement and Valuation of Parental Involvement

The parents were clear about their desire for the school to offer opportunities for parents to participate in an environment they perceived as nonjudgmental. This conclusion is in keeping with prior studies focusing on what motivates parental involvement. For example, Hoover-Dempsey et al. (2005) and Hoover-Dempsey and Whitaker (2010) concluded that parents feel inspired to be engaged and involved when they perceive that the school and teachers are genuinely interested in their involvement and input.

In the current study, the limited invitations from teachers for parents to get involved in their children's education resulted had a negative effect on parental perceptions of the role played by the school in the development and maintenance of the partnership between the home and the school. Furthermore, Saudi parents of elementary school-aged children with learning disabilities shared the view that their ideas were not consistently considered valuable or respected, noting that the schools often did not incorporate their suggestions for how their children could be successfully instructed. This may be attributed to the fact that teachers perceive themselves as experts in providing knowledge and that parents, therefore, are the beneficiaries of that knowledge. This is a relationship parents report they have no choice but to accept if they hope to continue securing services for their children with learning disabilities (Hess et al., 2006).

Parents also shared the perception that their comparative lack of participation in their children's education was, to a certain degree, a result of poor communication with teachers. Some parents indicated that they did not participate because the teachers had not invited them to participate. This is a conclusion in line with Hess et al. (2006), who reported that families were willing to participate in educating their children with learning disabilities but did not have established, communicative relationships with teachers.

Parental Work and Time Constraints

In keeping with conclusions from the literature, some parents in the current study reported that work and overall time constraints prevented them from participating in the partnership between the home and school (Baker et al., 2016). Indeed, work commitments were among the most important barriers preventing their involvement with their children's school (Murray et al., 2014). Several participants reported challenges when they attempt to obtain leave from work to

15405826, 2023, 2, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ddrp.12304 by Oakland University Library, Wiley Online Library on [31/05/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

attend activities at their children's school. Their apprehension concerning failing to attend these activities brings to the fore the gap between what is said about allowing parents to participate and the practical situation concerning the partnership between the home and the school.

Beyond time and effort, parents also need to invest emotional energy to engage with teachers and the school. To that end, the results of the current study corroborate findings in the literature regarding the importance of school leaders displaying desirable attributes and attitudes (e.g., friendliness, welcoming, encouraging) that can facilitate a productive partnership between the home and school (Broomhead, 2018). The participants' responses made it clear that they appreciated welcoming gestures from the school leaders, such as greetings, sending a note of gratitude for the work they did for the school, or making time available to interact with them. Such gestures make the climate in the school warm and inviting for parents to participate. This is a finding in keeping with the conclusions of numerous scholars regarding the important role that school leadership plays in developing, supporting, and maintaining a school environment that invites parents to participate (Siegel et al., 2019).

Teacher Training and Perceptions about Parental Involvement

Teachers who have received training on the importance of developing and maintaining partnerships with parents are more likely to adopt a proactive approach to establishing these relationships (Curry & Adams, 2014). Such partnerships may produce benefits for both teachers and parents. For example, teachers report higher job satisfaction when they have a healthy relationship with the parents of the children they instruct and communication is open (Binns et al., 1998). Notwithstanding this observation, teacher preparation programs addressing partnerships with parents are usually restricted to courses in special education or early childhood education (Murray & Mereoiu, 2016). Not surprising, when asked to identify barriers that hinder teacher–family involvement, teachers often identify a lack of teacher preparation (Ratcliff & Hunt, 2009). That is, even though teachers are conscious of the important role of parental involvement, they often do not receive sufficient training in their preservice programs or continuing professional development for partnering with parents in a meaningful manner (Hiatt-Michael, 2006).

However, to create effective partnerships with parents, teachers need more than skills and knowledge. They also need to develop and maintain an openness to parental input (Ratcliff & Hunt, 2009). According to Ratcliff and Hunt (2009), approaches to family participation must be diverse, wide-ranging, and amalgamated across teacher preparation programs as a single instructional method may not be sufficient to prepare teachers to work effectively with parents. Such training should also include opportunities for interactive experiences between parents and teacher candidates.

As in previous studies (e.g., Crozier & Davies, 2007), parents in the current research reported a willingness to increase their communication with their child's teachers. In particular, participants expressed a positive outlook when there is authentic two-way communication, where they have an opportunity to provide information instead of just receiving it, and perceived any communication opportunity as empowering (Crozier & Davies, 2007). Such two-way communication must be based on mutual understanding and respect. Along those lines, Harris and Goodall (2008) argue that parents must be shown by teachers and by school leaders that they are important, for example, by ensuring that they are treated as a central part of the learning process, with schools providing support to those who wish to be involved.

We suggest that schools actively investigate ways to establish a sense of belonging for parents through developing positive relationships based on respect and understanding of parents' experiences and agency (see John-Akinola & Gabhainn, 2014). Sime and Sheridan (2014) concluded that positive relationships between the school and parents provide cultural capital because they afford parents access to knowledge; however, McKenna and Millen (2013) found that even when parents felt included and welcome, they still felt as if they were on the outside of the educational experiences of their children. Thus, while a sense of belonging is required to facilitate engagement by parents, it may not always be sufficient unless schools and teachers communicate that they trust and appreciate parents' ability to share responsibility for their children's learning.

Limitations, Implications, and Recommendations

No approach to parental engagement is suitable for every context (Goodall & Montgomery, 2014). Schools must be flexible when collaborating with parents. The barriers experienced when practitioners attempt to adopt family-centered practices have been identified in several previous studies. Chief among them are inefficiencies in training models made available to professionals, a lack of evidence-based research on the attitudes of professionals, and a dearth of awareness regarding the effectiveness of various approaches (Wade et al., 2007). Even though research supports implementing a family-centered model when teaching and caring for learners with disabilities, negative and noncollaborative relationships between professionals and parents sometimes exist (Dunst et al., 2007).

Based on the example set by Lumby (2007), who acknowledged that in academic research the voices of parents are often obscured by the expectations and doubts of researchers, policymakers, and professionals, the literature review for the current study focused specifically on research that included the directly transcribed responses of parents. This, in turn, formed the basis of the study's analysis in an effort to respect and appreciate parental perceptions as essential instead of treating them as just one among many alternative perspectives (McQueen & Hobbs, 2014). McKenna and Millen (2013) present parental presence and voice models, highlighting the role played by acknowledging, sharing, and respecting parental perceptions.

Parents of children with learning disabilities are under increased stress and need strategies that can assist them in coping and adapting to the requirements of daily life (e.g., Park

15405826, 2023, 2, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ldrp.12304 by Oakland University Library, Wiley Online Library on [31/05/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

et al., 2002). As parents of children with learning disabilities become overwhelmed with meeting the needs of their children, they may lack the time or energy required to participate in the child's academic activities. Although the scope of the current study did not include consideration of the social networks of parents of learners with disabilities, future studies may address these issues. Studies involving parents' social networks may assist in improving opportunities for parental support to meet the demands of having a child with a learning disability.

The scale and size of a study can impose limitations on the extent to which findings may be generalized to a broader population (Lichtman, 2010). With regard to the current study, this challenge could be mitigated by using both qualitative and quantitative methodologies to identify how collaborative learning partnerships influence students' learning outcomes. Specifically, a study assessing a wider population within and outside the Middle East may assist in evaluating the effect of improved operational processes on the partnerships between the home and school on students' learning outcomes, bringing to the fore insights into whether such processes helped resolve tensions between teachers and parents. Future studies also may attempt to answer questions linked to the models of partnerships that schools could use to improve outcomes. For example, such studies also might investigate how partnerships impact student learning outcomes over the long term and whether schools and teachers are cognizant of the value of parental perceptions of their children's learning styles. Finally, future research could profitably explore whether the school's efforts to support such partnerships is sustainable and equitable over the long term for both teachers and parents.

ACKNOWLEDGMENTS

The Deanship of Scientific Research (DSR) at King Abdulaziz University, Jeddah, Saudi Arabia, funded this project, under grant no. KEP-97-120-42.

RESEARCH REVIEW AND APPROVAL

Research Ethics Committee at King Abdulaziz University, protocol KEP-97-120-42, date of approval: 15/02/2021.

REFERENCES

Al-Dababneh, K. A. (2018). Barriers preventing parental involvement in mainstream education of children with specific learning disabilities: parent perspectives. *European Journal of Special Needs Education*, *33*(5), 615–630.

Alobaid, M. A. (2018). *Parental participation in the education of students with learning disabilities in Saudi Arabia*. Cardinal Stritch University.

Alquraini, T. (2010). Special education in Saudi Arabia: Challenges, perspectives, future possibilities. *International Journal of Special Education*, *25*(3), 139–147.

Avnet, M., Makara, D., Larwin, K. H., & Erickson, M. (2019). The impact of parental involvement and education on academic achievement in elementary school. *International Journal of Evaluation and Research in Education*, *8*(3), 476–483.

Baker, T. L., Wise, J., Kelley, G., & Skiba, R. J. (2016). Identifying barriers: Creating solutions to improve family engagement. *School Community Journal*, *26*(2), 161–184.

Barger, M. M., Kim, E. M., Kuncel, N. R., & Pomerantz, E. M. (2019). The relation between parents' involvement in children's schooling and children's adjustment: A meta-analysis. *Psychological Bulletin*, *145*(9), 855–890.

Barnes, C. (2019). Understanding the social model of disability: Past, present and future. In N. Watson, A. Roulstone, & C. Thomas (Eds.), *Routledge handbook of disability studies* (2nd ed., pp. 14–31). Routledge.

Binns, K., Steinberg, A., & Amorosi, S. (1998). *The Metropolitan Life survey of the American teacher 1998: Building family-school partnerships: Views of teachers and students*. Metropolitan Life Insurance Company.

Boit, R. (2020). Navigating the process of building parent-teacher partnerships: Experiences of early childhood pre-service teachers. *Journal of Childhood, Education & Society*, *1*(2), 167–181.

Bower, H. A., & Griffin, D. (2011). Can the Epstein model of parental involvement work in a high-minority, high-poverty elementary school? A case study. *Professional School Counseling*, *15*(2), 77–87.

Brantlinger, E., Jimenez, R., Klingner, J., Pugach, M., & Richardson, V. (2005). Qualitative studies in special education. *Exceptional Children*, *71*(2), 195–207.

Broomhead, K. (2018). Perceived responsibility for developing and maintaining home-school partnerships: The experiences of parents and practitioners. *British Journal of Special Education*, *45*(4), 435–453.

Carpenter, B. (2007). The impetus for family centred early childhood intervention. *Child: Care, Health and Development*, *33*(6), 664–669.

Castro, D. C., Bryant, D. M., Peisner-Feinberg, E. S., & Skinner, M. L. (2004). Parent involvement in Head Start programs: The role of parent, teacher and classroom characteristics. *Early Childhood Research Quarterly*, *19*(3), 413–430.

Cohen, L., Manion L., & Morrison, K. (2011). *Research methods in education* (7th ed.). Routledge.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage.

Crozier, G., & Davies, J. (2007). Hard to reach parents or hard to reach schools? A discussion of Home-school relations, with particular reference to Bangladeshi and Pakistani parents. *British Educational Research Journal*, *33*(3), 295–313.

Curry, K. A., & Adams, C. M. (2014). Parent social networks and parent responsibility: Implications for school leadership. *Journal of School Leadership*, *24*(5), 918–948.

Denzin, N. K., & Lincoln, Y. S. (2018). *The Sage handbook of qualitative research* (5th ed.). Sage Publications.

Dunst, C. J., Trivette, C. M., & Hamby, D. W. (2007). Meta-analysis of family-centred help giving practices research. *Mental retardation and Developmental Disabilities Research Reviews*, *13*(4), 370–378.

Dyson, L. L. (1996). The experiences of families of children with learning disabilities: Parental stress, family functioning, and sibling self-concept. *Journal of Learning Disabilities*, *29*(3), 280–286.

Epstein, J. L. (2001). Introduction to the special section. New directions for school, family, and community partnerships in middle and high schools. *NASSP Bulletin*, *85*, 3–6.

Epstein, J. L. (2010). School/family/community partnerships: Caring for the children we share. *Phi Delta Kappa Magazine*, *92*(3), 81–96. https://doi.org/10.1177/003172171009200326

Epstein, J. L., & Sanders, M. G. (2006). Prospects for change: Preparing educators for school, family, and community partnerships. *Peabody Journal of Education*, *81*, 81–120.

Espe-Sherwindt, M. (2008). Family centred practice: Collaboration, competency and evidence. *Support for Learning*, *23*(3), 136–143.

Goodall, J., & Montgomery, C. (2014). Parental involvement to parental engagement: A continuum. *Educational Review*, *66*(4), 399–410.

Gordon, M. F., & Louis, K. S. (2012). How to harness family and community energy. In K. Leithwood & K. S. Louis (Eds.), *Linking leadership to student learning* (pp. 57–67). Jossey-Bass.

Green, C. L., Walker, M. T., Hoover-Dempsey, K. V., & Sandler, H. M. (2007). Parents' motivations for involvement in children's education: An empirical test of a theoretical model of parent involvement. *Journal of Educational Psychology*, *99*(3), 532–544.

15405826, 2023, 2, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/ldrp.12304 by Oakland University Library, Wiley Online Library on [31/05/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

MEDICAL SCIENCE MONITOR

CLINICAL RESEARCH

e-ISSN 1643-3750
© Med Sci Monit, 2020; 26: e925591
DOI: 10.12659/MSM.925591

Received: 2020.05.01
Accepted: 2020.06.30
Available online: 2020.07.15
Published: 2020.09.12

The Effects of Online Homeschooling on Children, Parents, and Teachers of Grades 1–9 During the COVID-19 Pandemic

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
Literature Search F
Funds Collection G

ACEF Ying Zhao
AD Yong Guo
BCF Yu Xiao
BFG Ranke Zhu
BDF Wei Sun
BF Weiyong Huang
BF Deyi Liang
BCD Liuying Tang
F Fan Zhang
BG Dongsheng Zhu
A Jie-Ling Wu

Department of Children's Health Care, Guangdong Women and Children Hospital, Guangzhou Medical University, Guangzhou, Guangdong, P.R. China

Corresponding Author: Jie-Ling Wu, e-mail: jieling3861@163.com
Source of support: Departmental sources

Background: Beginning in the 2020 spring semester, due to the COVID-19 pandemic, all school-age children in China were homeschooled via live/recorded broadcasts, online group communication, and software-based homework submission. This study assessed the effects of and proper preparation for this educational approach.

Material/Methods: The homeschooling behaviors and feelings of school-age children were assessed with 2010 online surveys obtained separately from students, parents, and teachers of grades 1–9 in 15 Chinese provinces. Answers were compared among low- (grades 1–3), middle- (grades 4–6), and high- (grades 7–9) grade groups. The chi-square test was used to identify significant differences between groups.

Results: We found that 76% of the respondents thought the homeschooling style was acceptable. However, teachers were concerned that students' interest, focus, and academic performance would decline. Sixty-nine percent of the parents reported their children had more than 3 hours of daily screen time, and 82% of students had less than 2 hours of daily outdoor activity. Ninety-five percent of the parents were concerned about their children's eyesight. Additionally, 17.6% of the students were suspected to have emotional or behavioral problems according to the parent-rated Strengths and Difficulties Questionnaire (SDQ) results. The Self-Rating Anxiety Scale (SAS) results of parents and teachers showed higher levels of anxiety than usual.

Conclusions: Students should continue the going-to-school rhythm at home to cope with changes caused by the COVID-19 pandemic. Integrated grade-specific approaches are needed. Because long screen time and insufficient outdoor activities can severely affect children's eyesight, appropriate eye-protection measures should be implemented.

MeSH Keywords: Computer Communication Networks • COVID-19 • Quarantine • Schools

Full-text PDF: https://www.medscimonit.com/abstract/index/idArt/925591

3010 5 — 31

This work is licensed under Creative Common Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [Current Contents/Clinical Medicine] [SCI Expanded] [ISI Alerting System] [ISI Journals Master List] [Index Medicus/MEDLINE] [EMBASE/Excerpta Medica] [Chemical Abstracts/CAS]

Background

Home confinement was implemented nationwide in China in response to the coronavirus disease 2019 (COVID-19) pandemic. Consequently, all school-age children received homeschooling from the beginning of the 2020 spring semester [1]. Although children were considered to be less affected by the virus than adults, as revealed by clinical experience, they were not exempt from infection but merely showed less severe symptoms [2]. Given the length of the home confinement period, homeschooling was considered both necessary and effective under the circumstances [3].

Unlike the conventional homeschooling style applied in other countries, where parents, relatives, or other knowledgeable persons act as instructors and conduct basic education at home [4], the Chinese homeschooling style is a combination of live/recorded broadcasts, WeChat/DingTalk group communication, and software-based homework submission [5]. All school subjects are taught online, including the major subjects of language, science, and math and the minor subjects of morality, music, art, and gym. As this style has never been used before, and thus no previous experience can be referenced, the present study assessed the effects of and proper preparation for this educational approach.

According to the Ministry of Education, approximately 180 million primary and secondary students were being homeschooled in China. Concerns were raised regarding their mental and physical health, as well as academic performance [6,7]. To understand the possible influence, both direct and indirect, of this homeschooling style on their academic performance, we conducted a survey of primary and secondary school students enrolled in homeschooling, as well as their parents and teachers.

Material and Methods

Sample

Students enrolled in homeschooling and parents and teachers of grades 1–9 were selected for this survey. Excluding unwilling participants, responses with repeated data, and questionnaires with multiple unanswered items, a total of 2010 valid questionnaires were collected, with 738 answered by students, 1062 answered by parents (or similar guardians), and 210 answered by teachers.

Measures

By means of online questionnaires developed on the "Wenjuanxing" website and submitted via cell phone, learning- and adaptation-related questions (mainly single-choice and a few fill-in-the-blank questions) were delivered separately to the students, parents, and teachers to assess homeschooling-related behaviors, feelings, and somatic effects [8]. The questions were answered as "strongly agree", "agree", "neither agree nor disagree", "disagree", and "strongly disagree", and the choice "do not know" was included in some of the questions for parents and teachers. The survey lasted for 7 days in the second week (7 to 13 March 2020) of the homeschooling semester.

Demographics

Basic demographic information, including age and gender of the surveyed students, parents, and teachers, was collected as part of the survey. The relationship of the respondent with the homeschooled child and the child's gender and age were also included in the parents' survey.

Survey of students

Questions regarding interest in learning, interaction in class, feelings, physical discomfort, screen time, outdoor activity time, sleeping time, and schooling style preference were included in the survey of students. The target population was students in grades 1–9 who were currently taking online classes.

Survey of parents

Parents were asked the same questions regarding one of their homeschooled children in grades 1–9 to provide a different angle from the parents' perspectives. Additional questions on class monitoring and children's eyesight were included. Moreover, the parent-rated Strengths and Difficulties Questionnaire (SDQ) was used to assess the emotional symptoms, conduct problems, peer relationships, and other psychological characteristics of the children [9]. Previous studies in China have proven the good psychometric properties of the SDQ [10]. A cutoff score of 17 (standard score) was used to indicate an abnormal range, referring to previous studies of Chinese children [11]. The Self-Rating Anxiety Scale (SAS) was used to assess the anxiety levels of parents, with a cutoff score of 50 (standard scores ≥50 indicate anxiety) [12]. The SDQ and SAS questions were set to be skippable so that parents could decide whether to participate.

Survey of teachers

The questions addressed to teachers were counterparts of those presented to students as a reflection of students' behaviors and feelings. Teachers were also asked about their anticipation of students' academic performance based on their experience of teaching online classes. Additionally, the SAS was also addressed to teachers and set to be skippable.

This work is licensed under Creative Common Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [Current Contents/Clinical Medicine] [SCI Expanded] [ISI Alerting System] [ISI Journals Master List] [Index Medicus/MEDLINE] [EMBASE/Excerpta Medica] [Chemical Abstracts/CAS]

Statistical analysis

The answers collected from students, parents, and teachers were compared in the low- (grades 1–3), middle- (grades 4–6), and high- (grades 7–9) grade groups. To simplify the analysis, "strongly agree" and "agree" were both counted as "agree", while "disagree" and "strongly disagree" were both counted as "disagree". In the few cases when the answer was "do not know", it was also counted as "disagree". The chi-square test was used to identify statistically significant differences between groups. SPSS (Release 24, IBM SPSS Statistics) for Windows was used for data analyses, and $p<0.05$ was considered significant.

Results

Demographics

A total of 2010 valid questionnaires were collected from 15 provinces in China. The students' questionnaires were completed by children with an average age of 11 years, while the parents who completed questionnaires had children with an average age of 10 years. The gender ratio of the students/children was generally even. Sixty-five percent of the parents' questionnaires were answered by mothers and 61.1% of the parents were 31–40 years old. We found that 63.3% of the families reported having 1 child taking online classes. The teachers' questionnaires were completed by teachers teaching online classes – 76.2% were female, 88.1% were under 50 years old, and the teachers sampled were distributed evenly among grades (Table 1).

Student results

According to the students' questionnaires, 55.6% of the students were interested in this homeschooling style, but only 37.7% of them could interact actively with teachers and classmates during online classes. Among students, 93.2% reported not being distracted (playing games or chatting with friends) during online classes, and the percentages increased as the grades increased (89.2%, 94%, and 96.4% for the low-, middle-, and high-grade groups, respectively). Among students, 74.4% reported no fatigue/sleepiness, while 84.6% reported having no back pain. However, the percentages of the high-grade group (63.1% for no fatigue/sleepiness and 72.6% for no back pain) were considerably lower than the averages. Among students, 66.7% reported having less than 1 hour of screen time per day, while 13% reported more than 3 hours. Among students, 82% reported having less than 2 hours of outdoor activity per day. Notably, 42.9% of the high-grade group students reported no outdoor activity time at all, while 39.2% and 40.1% of the low- and middle-grade groups, respectively, reported 1–2 hours per day. Regarding daily sleeping time, 56.3% and 55.2% of the low- and middle-grade groups, respectively, reported 9–10 hours, while 53.6% of the high-grade group reported 7–8 hours. We found that 83.5% of the students preferred classroom-based schooling to homeschooling and other schooling styles (Table 2).

Parent results

We found 41.9% of the surveyed parents believed their children were interested in the homeschooling style. However, 57.4% of them considered that there was not enough interaction during online classes. Among parents, 77.4% considered that their children focused on learning during online classes, and the percentage increased as the grades increased (73.4%, 80.3%, and 81.6% for low, middle, and high grades, respectively). Nevertheless, 50% of them believed that monitoring was required during online classes, with the percentage decreasing as the grades increased (60.9%, 43.1%, and 33.3% for low, middle, and high grades, respectively). Up to 57.2% of the parents reported no fatigue/sleepiness in their children, while 73.3% reported no back pain, but the percentages of the high-grade group (34.5% for no fatigue/sleepiness and 55.2% for no back pain) were considerably lower than the averages. We found that 68.8% of the parents reported that their children had more than 3 hours of screen time per day, which exceeded the recommendation (≤2 hours a day) of the American Academy of Pediatrics [13,14]. Among parents, 43.7% reported no outdoor activity for their children, especially for the high-grade group (60.9%). In particular, parents of students in all grades expressed concern about their children's eyesight (94.8%, 94%, and 97.7% for low, middle, and high grades, respectively). Regarding their children's sleeping time, 62.1% of the high-grade group parents reported 7–8 hours, while 59.2% and 59.4% of the low- and middle-grade group parents, respectively, reported 9–10 hours. We found that 95.6% of the parents preferred classroom-based schooling to other schooling styles (Table 3).

Teacher results

Among teachers, 35.2% considered that this homeschooling style would increase their students' interest in learning, but the percentage decreased quickly as the grades increased (41.5%, 40%, and 16.7% for low, middle, and high grades, respectively). Conversely, 25.7% of the teachers considered that this style would decrease their students' interest, and the percentage increased quickly as the grades increased (18.3%, 26.3%, and 37.5% for low, middle, and high grades, respectively). We found that 74.3% of the teachers felt they could interact with their students during online classes, although the percentage decreased as the grades increased (80.5%, 76.3%, and 60.4% for low, middle, and high grades, respectively). However, 41.9% believed that their students were truly focused in class. Only 8.6% reported that they could effectively monitor their

This work is licensed under Creative Common Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [Current Contents/Clinical Medicine] [SCI Expanded] [ISI Alerting System] [ISI Journals Master List] [Index Medicus/MEDLINE] [EMBASE/Excerpta Medica] [Chemical Abstracts/CAS]

Table 1. Characteristics of students, parents and teachers.

Variables	Grades 1–3	Grades 4–6	Grades 7–9	Total sample
Students				
Number	158 (21)	496 (67)	84 (12)	738 (100)
Age, mean (sd)	8.8 (1.1)	11.3 (0.9)	12.9 (0.8)	11.0 (1.7)
Gender, n (%)				
Male	95 (60)	245 (49)	40 (48)	380 (51)
Female	63 (40)	251 (51)	44 (52)	358 (49)
Parents				
Number	458 (43)	517 (49)	87 (8)	1062 (100)
Age, mean (sd)	8.1 (1.2)	11.1 (0.9)	13.1 (0.9)	10.0 (2.0)
Gender, n (%)				
Male	230 (50)	293 (57)	49 (56)	572 (54)
Female	228 (50)	224 (43)	38 (44)	294 (46)
Responder				
Mother	127 (27.7)	170 (32.9)	26 (29.9)	323 (30.4)
Father	315 (68.8)	317 (61.3)	58 (66.7)	690 (65)
Others	16 (3.5)	30 (5.8)	3 (3.4)	49 (4.6)
Age of responder				
≤30	65 (14.2)	28 (5.4)	3 (3.4)	96 (9)
31–40	306 (66.8)	301 (58.2)	42 (48.3)	649 (61.1)
41–50	76 (16.6)	166 (32.1)	38 (43.7)	280 (26.4)
>50	11 (2.4)	22 (4.3)	4 (4.6)	37 (3.5)
Number of children enrolled in homeschooling				
1	298 (65.1)	320 (61.9)	54 (62.1)	672 (63.3)
2	136 (29.7)	180 (34.8)	28 (32.2)	344 (32.4)
≥3	24 (5.3)	17 (3.3)	5 (5.7)	45 (4.4)
Teachers				
Number	82 (39)	80 (38)	48 (22)	210 (100)
Age, n (%)				
≤30	44 (53.7)	32 (40)	8 (16.7)	84 (40)
31–40	17 (20.7)	19 (23.8)	11 (22.9)	47 (22.4)
41–50	14 (17.1)	23 (28.8)	17 (35.4)	54 (25.7)
>50	7 (8.5)	6 (7.5)	12 (25)	25 (11.9)
Gender, n (%)				
Male	14 (17.1)	21 (26.3)	15 (31.3)	50 (23.8)
Female	68 (82.9)	59 (73.8)	33 (68.8)	160 (76.2)

This work is licensed under Creative Common Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [Current Contents/Clinical Medicine] [SCI Expanded] [ISI Alerting System] [ISI Journals Master List] [Index Medicus/MEDLINE] [EMBASE/Excerpta Medica] [Chemical Abstracts/CAS]

Table 2. Homeschooling behaviors and feelings of students.

Variables	Grades 1–3	Grades 4–6	Grades 7–9	Total sample	p-Value
	158 (21%)	496 (67%)	84 (12%)	738 (100%)	
Are you interested in this homeschooling style?					0.975
Agree	87 (55.1)	279 (56.3)	44 (52.4)	410 (55.6)	
Neither agree nor disagree	44 (27.8)	133 (26.8)	25 (29.8)	202 (27.4)	
Disagree	27 (17.1)	84 (16.9)	15 (17.9)	126 (17.1)	
Can you interact with teachers and classmates during online classes?					0.112
Agree	57 (36.1)	200 (40.3)	21 (25)	278 (37.7)	
Neither agree nor disagree	35 (22.2)	107 (21.6)	22 (26.2)	164 (22.2)	
Disagree	66 (41.8)	189 (38.1)	41 (48.8)	296 (40.1)	
Do you play games or chat with friends during online classes?					0.009*
Agree	9 (5.7)	10 (2)	1 (1.2)	20 (2.7)	
Neither agree nor disagree	8 (5.1)	20 (4)	2 (2.4)	30 (4.1)	
Disagree	141 (89.2)	466 (94)	81 (96.4)	688 (93.2)	
Do you feel fatigue/sleepiness during the online classes?					0.071
Agree	18 (11.4)	38 (7.7)	10 (11.9)	66 (8.9)	
Neither agree nor disagree	25 (15.8)	77 (15.5)	21 (25.0)	123 (16.7)	
Disagree	115 (72.8)	381 (76.8)	53 (63.1)	549 (74.4)	
Do you feel back pains during online classes?					0.031*
Agree	8 (5.1)	22 (4.4)	7 (8.3)	37 (5)	
Neither agree nor disagree	12 (7.6)	47 (9.5)	16 (19.0)	75 (10.2)	
Disagree	138 (87.3)	427 (86.1)	61 (72.6)	626 (84.6)	
How long is your screen time every day?					0.189
<1 hours	105 (66.5)	322 (64.9)	65 (77.4)	492 (66.7)	
1–3 hours	29 (18.4)	109 (22)	12 (14.3)	150 (20.3)	
≥3 hours	24 (15.2)	65 (13.1)	7 (8.3)	96 (13)	
How long is the outdoor activity time every day?					<0.001*
None	38 (24.1)	118 (23.8)	36 (42.9)	192 (26)	
<1 hours	19 (12)	94 (19)	20 (23.8)	133 (18)	
1–2 hours	62 (39.2)	199 (40.1)	19 (22.6)	280 (37.9)	
≥2 hours	39 (24.7)	85 (17.1)	9 (10.7)	133 (18)	
How long is your sleeping time every day?					0.013*
<7 hours	15 (9.5)	33 (6.7)	6 (7.1)	54 (7.1)	
7–8 hours	38 (24.1)	136 (27.4)	45 (53.6)	219 (29.7)	
9–10 hours	89 (56.3)	274 (55.2)	31 (36.9)	394 (53.4)	
>10 hours	16 (10.1)	53 (10.7)	2 (2.4)	71 (9.6)	
Which schooling style do you prefer?					0.501
Homeschooling with online classes	15 (9.5)	65 (13.1)	11 (13.1)	91 (12.3)	
Classroom based schooling	138 (87.3)	405 (81.7)	71 (84.5)	614 (83.5)	
Study at home by yourself	2 (1.3)	14 (2.8)	0 (0.0)	16 (2.2)	
Others	3 (1.9)	12 (2.4)	2 (2.4)	17 (2.3)	

This work is licensed under Creative Common Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [Current Contents/Clinical Medicine] [SCI Expanded] [ISI Alerting System] [ISI Journals Master List] [Index Medicus/MEDLINE] [EMBASE/Excerpta Medica] [Chemical Abstracts/CAS]

Table 3. Homeschooling behaviors and feelings of Barents.

Variables	Grades 1–3	Grades 4–6	Grades 7–9	Total sample	p-Value
	458 (43%)	517 (49%)	87 (8%)	1062 (100%)	
Do you think your child is interested in this homeschooling style?					0.779
Agree	183 (40)	226 (43.7)	36 (41.4)	445 (41.9)	
Neither agree nor disagree	140 (30.6)	143 (27.7)	24 (27.6)	307 (28.9)	
Disagree	135 (29.5)	148 (28.6)	27 (31)	310 (29.2)	
Do you think your child can interact with teachers and classmates during online classes?					0.305
Agree	105 (22.9)	114 (22.1)	18 (20.7)	237 (22.3)	
Neither agree nor disagree	91 (19.9)	113 (21.9)	11 (12.6)	215 (20.2)	
Disagree	262 (57.2)	290 (56.1)	58 (66.7)	610 (57.4)	
Do you think your child can focus on learning during online classes?					0.014*
Agree	336 (73.4)	415 (80.3)	71 (81.6)	822 (77.4)	
Neither agree nor disagree	85 (18.6)	76 (14.7)	10 (11.5)	171 (16.1)	
Disagree	37 (8.1)	26 (5)	6 (6.9)	69 (6.5)	
Do you think your child requires monitoring when taking the online classes?					<0.001*
Agree	279 (60.9)	223 (43.1)	29 (33.3)	531 (50)	
Neither agree nor disagree	115 (25.1)	162 (31.3)	29 (33.3)	306 (28.8)	
Disagree	64 (14)	132 (25.5)	29 (33.3)	225 (21.2)	
Do you think your child feels fatigue/sleepiness during the online classes?					<0.001
Agree	71 (15.5)	63 (12.2)	19 (21.8)	153 (14.4)	
Neither agree nor disagree	130 (28.4)	134 (25.9)	38 (43.7)	302 (28.4)	
Disagree	257 (56.1)	320 (61.9)	30 (34.5)	607 (57.2)	
Do you think your child feels back pains during online classes?					0.002*
Agree	25 (5.5)	30 (5.8)	12 (13.8)	67 (6.3)	
Neither agree nor disagree	87 (19)	103 (19.9)	27 (31)	217 (20.4)	
Disagree	346 (75.5)	384 (74.3)	48 (55.2)	778 (73.3)	
How long is your child's screen time every day?					*0.052*
<1 hours	77 (16.8)	73 (14.1)	13 (14.9)	163 (15.3)	
1–3 hours	79 (17.2)	84 (16.2)	5 (5.7)	168 (15.8)	
≥3 hours	302 (65.9)	360 (69.6)	69 (79.3)	731 (68.8)	
How long is you child's outdoor activity time every day?					0.001*
None	179 (39.1)	232 (44.9)	53 (60.9)	464 (43.7)	
<1 hours	105 (22.9)	86 (16.6)	16 (18.4)	207 (19.5)	
1–2 hours	88 (19.2)	124 (24)	13 (14.9)	225 (21.2)	
≥2 hours	86 (18.8)	75 (14.5)	5 (5.7)	166 (15.6)	

This work is licensed under Creative Common Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [Current Contents/Clinical Medicine] [SCI Expanded] [ISI Alerting System] [ISI Journals Master List] [Index Medicus/MEDLINE] [EMBASE/Excerpta Medica] [Chemical Abstracts/CAS]

Table 3 continued. Homeschooling behaviors and feelings of Barents.

Variables	Grades 1–3	Grades 4–6	Grades 7–9	Total sample	p-Value
	458 (43%)	517 (49%)	87 (8%)	1062 (100%)	
How long is your child's sleeping time every day					<0.001*
<7 hours	13 (2.8)	14 (2.7)	8 (9.2)	35 (3.3)	
7–8 hours	151 (33)	173 (33.5)	54 (62.1)	378 (35.6)	
9–10 hours	271 (59.2)	307 (59.4)	21 (24.1)	599 (56.4)	
>10 hours	23 (5)	23 (4.4)	4 (4.6)	50 (4.7)	
Are you concerned about your child's eyesight taking online classes?					*0.362*
Yes	434 (94.8)	486 (94)	85 (97.7)	1005 (94.6)	
No	24 (5.2)	31 (6)	2 (2.3)	57 (5.4)	
Which schooling style do you prefer?					0.308
Homeschooling with online classes	3 (0.7)	12 (2.3)	3 (3.4)	18 (1.7)	
Classroom based schooling	443 (96.7)	491 (95)	81 (93.1)	1015 (95.6)	
Study at home by themselves	9 (2)	11 (2.1)	3 (3.4)	23 (2.2)	
Others	3 (0.7)	3 (0.6)	0 (0)	6 (0.6)	

students during online classes, with the percentage decreasing from 13.4% to 0% as the grades increased. Meanwhile, 52.9% of them considered that homeschooling would have a negative influence on their students' academic performance. Like the students and the parents, 83.8% of the teachers preferred classroom-based schooling to other styles (Table 4).

SDQ and SAS scores of parents and teachers

The results of the parent-rated SDQ indicated that 17.6% of the students were suspected to have emotional or behavioral problems, and low-grade students were considered more vulnerable than high-grade students (19.3%, 16.7%, and 13.7% for low, middle, and high grades, respectively). Merely 9.6% of the surveyed parents and 17.2% of the surveyed teachers showed elevated levels of anxiety, as indicated in the SAS results. More parents and teachers reported anxiety in the low- and middle-grade groups than in the high-grade group (10.8%, 8.9%, and 6.3% in parents and 18.5%, 20.8%, and 9.4% in teachers for low, middle, and high grades, respectively) (Table 5).

Discussion

The survey results indicated that most of the students, parents, and teachers thought the homeschooling style was acceptable, at least in the beginning. Positive attitudes are believed to have a positive influence on students' academic performance [15]. Nevertheless, it is notable that 25.7% of the teachers expressed concern that this style could diminish their students' interest in learning; the higher the grade, the more teachers were concerned.

It is commonly agreed that students' interest in learning is one of the most important factors influencing their academic performance. To preserve and improve students' interest in learning during this homeschooling period, it is suggested that the aspect of "teaching" be weakened and the aspect of "learning" be strengthened [16]. Information can be discovered and summarized by students themselves through explorative reading and research assignments. It is even better if the assignments are designed to be associated with real life to make full use of the home environment [17]. Instead of live/recorded broadcasts, multimedia methods (e.g., demonstrative experiments, animated videos, didactic games) can be applied. As the home environment is not dedicated to long-term learning, it is also important to minimize the number of learning tasks. Some subjects (e.g., music and gym) that are not suitable for online learning can be learned in the form of appreciation and family activities to reduce the amount of online time [18].

Interaction is an indicator of class participation. Good interaction in class can increase students' comprehension and application of knowledge and promote the learning effect [19]. Although 74.3% of the teachers considered that they could interact with students during online classes, 66.3% of the

This work is licensed under Creative Common Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [Current Contents/Clinical Medicine] [SCI Expanded] [ISI Alerting System] [ISI Journals Master List] [Index Medicus/MEDLINE] [EMBASE/Excerpta Medica] [Chemical Abstracts/CAS]

Table 4. Homeschooling behaviors and feelings of teachers.

Variables	Grades 1–3	Grades 4–6	Grades 7–9	Total sample	p-Value
	82 (39%)	80 (38%)	48 (22%)	210 (100%)	
Do you think that homeschooling will influence your students' interest in learning?					0.003*
Increased	34 (41.5)	32 (40)	8 (16.7)	74 (35.2)	
Same as usual	33 (40.2)	27 (33.8)	22 (45.8)	82 (39.0)	
Decreased	15 (18.3)	21 (26.3)	18 (37.5)	54 (25.7)	
Is there interaction between you and your students in your online classes?					0.007*
Yes, frequently/often	66 (80.5)	61 (76.3)	29 (60.4)	156 (74.3)	
Yes, sometimes	10 (12.2)	12 (15.0)	8 (16.7)	30 (14.3)	
No	6 (7.3)	7 (8.8)	11 (22.9)	24 (11.4)	
Do you think your students are focused in your online classes?					0.533
Very focused	34 (41.5)	38 (47.5)	16 (33.3)	88 (41.9)	
Sometimes	38 (46.3)	31 (38.8)	23 (47.9)	92 (43.8)	
No	10 (12.2)	11 (13.8)	9 (18.8)	30 (14.3)	
Can you monitor your students effectively during online classes?					0.006*
Effectively	11 (13.4)	7 (8.8)	0 (0)	18 (8.6)	
Sometimes	45 (54.9)	45 (56.3)	24 (50)	114 (54.3)	
No	26 (31.7)	28 (35)	24 (50)	78 (37.1)	
How do you anticipate the influence on your students' academic performance?					0.025*
Improve	17 (20.7)	17 (21.3)	6 (12.5)	40 (19)	
Same as usual	30 (36.6)	19 (23.8)	10 (20.8)	59 (28.1)	
Decline	35 (42.7)	44 (55)	32 (66.7)	111 (52.9)	
Which schooling style do you prefer?					0.267
Homeschooling with online classes	10 (12.2)	6 (7.5)	2 (4.2)	18 (8.6)	
Classroom based schooling	67 (81.7)	65 (81.3)	44 (91.7)	176 (83.8)	
Study at home by themselves with teachers' instructions	4 (4.9)	5 (6.3)	0 (0)	9 (4.3)	
Others	1 (1.2)	4 (5)	2 (4.2)	7 (3.3)	

students and 57.4% of the parents did not agree. This contrast probably indicates that teachers can pay attention to a small portion of the students during online classes, while the majority of students were neglected because they were not proactive.

To actively engage students in class interaction, parents can do more than providing the proper equipment. It is a good idea for parents to join their children as partners in online classes so that the students can interact not only with teachers and classmates but also with parents. Parents can note their children's shortcomings and provide feedback to teachers so that the teaching effect can be evaluated, with necessary adjustments made, and even individual tutoring assigned.

We found that 93.2% of the students reported that they were not distracted (not playing or chatting) during online classes, and 77.4% of the parents believed the same, but only 41.9% of the teachers agreed. Similarly, 50% of the parents considered that their children required monitoring in class, but 37.1% of the teachers thought they could not monitor their students at all. As a result, 52.9% of the teachers anticipated that their students' academic performance would be adversely affected

This work is licensed under Creative Common Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [Current Contents/Clinical Medicine] [SCI Expanded] [ISI Alerting System] [ISI Journals Master List] [Index Medicus/MEDLINE] [EMBASE/Excerpta Medica] [Chemical Abstracts/CAS]

Table 5. Results of parent-rated Strengths and Difficulties Questionnaire (SDQ)* and Self-rating Anxiety Scale (SAS) of parents** and teachers***.

Variables	Grades 1–3	Grades 4–6	Grades 7–9	Total sample	p-Value
SDQ					0.5
Normal	255 (80.7)	310 (83.3)	44 (86.3)	609 (82.4)	
Abnormal	61 (19.3)	62 (16.7)	7 (13.7)	130 (17.6)	
SAS of parents					0.537
Normal	265 (89.2)	265 (91.1)	45 (93.8)	575 (90.4)	
Abnormal	32 (10.8)	26 (8.9)	3 (6.3)	61 (9.6)	
SAS of teachers					0.389
Normal	44 (81.5)	38 (79.2)	29 (90.6)	111 (82.8)	
Abnormal	10 (18.5)	10 (20.8)	3 (9.4)	23 (17.2)	

* 739 parent-rated SDQ were collected, 55.1% with boys and 44.9% with girls; ** 636 parents' SAS were collected, 30.7% fathers, 64.0% mothers and 4.7% other relatives; *** 134 teachers' SAS were collected, 22.4% males and 77.6% females.

by this homeschooling style; the higher the grade, the more teachers expressed this negative anticipation.

There are several ways that parents can help students be more focused in class. Instead of telling the children to study hard, parents can set them an example by working hard at home and participating in classes with their children. The going-to-school rhythm can be continued at home by means such as setting up a study room that is similar to the classroom, having the students dressed in school uniforms before classes, and entering the study room as if entering the classroom. For teachers to effectively monitor students in class, online conferences/virtual classroom software can be used as supplements to the live/recorded broadcasts. With the camera on, teachers and students can see each other as they do in the classroom [20].

We found that 68.8% of the parents reported 3 hours and more of daily screen time for their children, but 82% of the students and 84.4% of the parents reported less than 2 hours of outdoor time. In addition, 94.6% of the parents were concerned about their children's eyesight [21]. Furthermore, although 74.4% of the students reported no fatigue/sleepiness and 84.6% reported no back pain, a clear difference in percentages between the low-/middle- and high-grade groups was reported by both students and parents.

In the present study, eye distance was less than 1 foot when studying, and sleep time of less than 7 hours is a risk factor for myopia [22]. Therefore, it is crucial to reduce students' screen time to mitigate the negative direct and indirect influences, even though they are being homeschooled [23]. One way to achieve this is to have as few classes a day as possible (as discussed before), and homework can be done in the traditional handwritten way instead of on computers and cellphones [18]. Children should be kept away from TVs and video games after class and be engaged in outdoor exercise (in the garden or even on the balcony) for at least 2 hours a day [24,25]. Correct posture during study and adequate sleeping time for school students should be assured. For after-class time, parents can help students develop hobbies at home, such as cooking, baking, drawing, gardening, and indoor exercise (e.g., skipping, dancing, yoga) [26].

According to the results of the parents' SDQs, we found that 17.6% of the students were suspected to have emotional or behavioral problems, and low-grade students were considered to be more vulnerable. The percentage of the abnormal range reported in the parents' SDQs was higher than that previously reported in China (12.1%) [11]. Similarly, the percentage of abnormal ranges reported in the SASs of parents and teachers were considerably higher than those of the general population [27], and both were higher for the low-grade groups than the high-grade groups. Previous studies have shown elevated anxiety levels of parents and teachers with children/students in primary schools [28,29]. Therefore, further investigation is required to determine whether the higher levels of anxiety revealed in the study are related to homeschooling.

We found that 83.5% of students, 95.6% of parents, and 83.8% of teachers preferred classroom-based schooling to other styles. Therefore, it is important to restore the classroom-based schooling style as soon as possible if students' and teachers' health and safety can be secured. In cities and provinces where no confirmed and suspected COVID-19 cases have been diagnosed within a certain period of time (e.g., 14 days), schools can be reopened with certain measures (e.g., washing hands and changing masks upon entering, maintaining physical distance in classes, limiting after-class activities) [30].

This work is licensed under Creative Common Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

Indexed in: [Current Contents/Clinical Medicine] [SCI Expanded] [ISI Alerting System] [ISI Journals Master List] [Index Medicus/MEDLINE] [EMBASE/Excerpta Medica] [Chemical Abstracts/CAS]

Van Wart et al. International Journal of Educational Technology in Higher Education (2020) 17:53
https://doi.org/10.1186/s41239-020-00229-8

International Journal of Educational Technology in Higher Education

RESEARCH ARTICLE Open Access

Integrating students' perspectives about online learning: a hierarchy of factors

Montgomery Van Wart*, Anna Ni, Pamela Medina, Jesus Canelon, Melika Kordrostami, Jing Zhang and Yu Liu

* Correspondence: mvanwart@csusb.edu
Development for the JHB College of Business and Public Administration, 5500 University Parkway, San Bernardino, California 92407, USA

Abstract

This article reports on a large-scale ($n = 987$), exploratory factor analysis study incorporating various concepts identified in the literature as critical success factors for online learning from the students' perspective, and then determines their hierarchical significance. Seven factors--Basic Online Modality, Instructional Support, Teaching Presence, Cognitive Presence, Online Social Comfort, Online Interactive Modality, and Social Presence--were identified as significant and reliable. Regression analysis indicates the minimal factors for enrollment in future classes—when students consider convenience and scheduling—were Basic Online Modality, Cognitive Presence, and Online Social Comfort. Students who accepted or embraced online courses on their own merits wanted a minimum of Basic Online Modality, Teaching Presence, Cognitive Presence, Online Social Comfort, and Social Presence. Students, who preferred face-to-face classes and demanded a comparable experience, valued Online Interactive Modality and Instructional Support more highly. Recommendations for online course design, policy, and future research are provided.

Keywords: Online education, Online teaching, Student perceptions, Online quality, Teaching presence, Cognitive presence, Student presence

Introduction

While there are different perspectives of the learning process such as learning achievement and faculty perspectives, students' perspectives are especially critical since they are ultimately the raison d'être of the educational endeavor (Chickering & Gamson, 1987). More pragmatically, students' perspectives provide invaluable, first-hand insights into their experiences and expectations (Dawson et al., 2019). The student perspective is especially important when new teaching approaches are used and when new technologies are being introduced (Arthur, 2009; Crews & Butterfield, 2014; Van Wart, Ni, Ready, Shayo, & Court, 2020). With the renewed interest in "active" education in general (Arruabarrena, Sánchez, Blanco, et al., 2019; Kay, MacDonald, & DiGiuseppe, 2019; Nouri, 2016; Vlachopoulos & Makri, 2017) and the flipped classroom approach in particular (Flores, del-Arco, & Silva, 2016; Gong, Yang, & Cai, 2020; Lundin, et al., 2018; Maycock, 2019; McGivney-Burelle, 2013; O'Flaherty & Phillips, 2015; Tucker, 2012) along with extraordinary shifts in the technology, the student perspective on online education is profoundly important. What shapes students' perceptions of quality integrate are their own sense of learning achievement, satisfaction with the support

Springer Open

© The Author(s). 2020 **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

they receive, technical proficiency of the process, intellectual and emotional stimulation, comfort with the process, and sense of learning community. The factors that students perceive as quality online teaching, however, has not been as clear as it might be for at least two reasons.

First, it is important to note that the overall online learning experience for students is also composed of non-teaching factors which we briefly mention. Three such factors are (1) convenience, (2) learner characteristics and readiness, and (3) antecedent conditions that may foster teaching quality but are not directly responsible for it. (1) Convenience is an enormous non-quality factor for students (Artino, 2010) which has driven up online demand around the world (Fidalgo, Thormann, Kulyk, et al., 2020; Inside Higher Education and Gallup, 2019; Legon & Garrett, 2019; Ortagus, 2017). This is important since satisfaction with online classes is frequently somewhat lower than face-to-face classes (Macon, 2011). However, the literature generally supports the relative equivalence of face-to-face and online modes regarding learning achievement criteria (Bernard et al., 2004; Nguyen, 2015; Ni, 2013; Sitzmann, Kraiger, Stewart, & Wisher, 2006; see Xu & Jaggars, 2014 for an alternate perspective). These contrasts are exemplified in a recent study of business students, in which online students using a flipped classroom approach outperformed their face-to-face peers, but ironically rated instructor performance lower (Harjoto, 2017). (2) Learner characteristics also affect the experience related to self-regulation in an active learning model, comfort with technology, and age, among others,which affect both receptiveness and readiness of online instruction. (Alqurashi, 2016; Cohen & Baruth, 2017; Kintu, Zhu, & Kagambe, 2017; Kuo, Walker, Schroder, & Belland, 2013; Ventura & Moscoloni, 2015) (3) Finally, numerous antecedent factors may lead to improved instruction, but are not themselves directly perceived by students such as instructor training (Brinkley-Etzkorn, 2018), and the sources of faculty motivation (e.g., incentives, recognition, social influence, and voluntariness) (Wingo, Ivankova, & Moss, 2017). Important as these factors are, mixing them with the perceptions of quality tends to obfuscate the quality factors directly perceived by students.

Second, while student perceptions of quality are used in innumerable studies, our overall understanding still needs to integrate them more holistically. Many studies use student perceptions of quality and overall effectiveness of individual tools and strategies in online contexts such as mobile devices (Drew & Mann, 2018), small groups (Choi, Land, & Turgeon, 2005), journals (Nair, Tay, & Koh, 2013), simulations (Vlachopoulos & Makri, 2017), video (Lange & Costley, 2020), etc. Such studies, however, cannot provide the overall context and comparative importance. Some studies have examined the overall learning experience of students with exploratory lists, but have mixed non-quality factors with quality of teaching factors making it difficult to discern the instructor's versus contextual roles in quality (e.g., Asoodar, Vaezi, & Izanloo, 2016; Bollinger & Martindale, 2004; Farrell & Brunton, 2020; Hong, 2002; Song, Singleton, Hill, & Koh, 2004; Sun, Tsai, Finger, Chen, & Yeh, 2008). The application of technology adoption studies also fall into this category by essentially aggregating all teaching quality in the single category of performance (Al-Gahtani, 2016; Artino, 2010). Some studies have used high-level teaching-oriented models, primarily the Community of Inquiry model (le Roux & Nagel, 2018), but empirical support has been mixed (Arbaugh et al., 2008); and its elegance (i.e., relying on only three factors) has not provided much insight to practitioners (Anderson, 2016; Cleveland-Innes & Campbell, 2012).

Research questions

Integration of studies and concepts explored continues to be fragmented and confusing despite the fact that the number of empirical studies related to student perceptions of quality factors has increased. It is important to have an empirical view of what students' value in a single comprehensive study and, also, to know if there is a hierarchy of factors, ranging from students who are least to most critical of the online learning experience. This research study has two research questions.

The first research question is: *What are the significant factors in creating a high-quality online learning experience from students' perspectives?* That is important to know because it should have a significant effect on the instructor's design of online classes. The goal of this research question is identify a more articulated and empirically-supported set of factors capturing the full range of student expectations.

The second research question is: *Is there a priority or hierarchy of factors related to students' perceptions of online teaching quality that relate to their decisions to enroll in online classes?* For example, is it possible to distinguish which factors are critical for enrollment decisions when students are primarily motivated by convenience and scheduling flexibility (minimum threshold)? Do these factors differ from students with a genuine acceptance of the general quality of online courses (a moderate threshold)? What are the factors that are important for the students who are the most critical of online course delivery (highest threshold)?

This article next reviews the literature on online education quality, focusing on the student perspective and reviews eight factors derived from it. The research methods section discusses the study structure and methods. Demographic data related to the sample are next, followed by the results, discussion, and conclusion.

Literature review

Online education is much discussed (Prinsloo, 2016; Van Wart et al., 2019; Zawacki-Richter & Naidu, 2016), but its perception is substantially influenced by where you stand and what you value (Otter et al., 2013; Tanner, Noser, & Totaro, 2009). Accrediting bodies care about meeting technical standards, proof of effectiveness, and consistency (Grandzol & Grandzol, 2006). Institutions care about reputation, rigor, student satisfaction, and institutional efficiency (Jung, 2011). Faculty care about subject coverage, student participation, faculty satisfaction, and faculty workload (Horvitz, Beach, Anderson, & Xia, 2015; Mansbach & Austin, 2018). For their part, students care about learning achievement (Marks, Sibley, & Arbaugh, 2005; O'Neill & Sai, 2014; Shen, Cho, Tsai, & Marra, 2013), but also view online education as a function of their enjoyment of classes, instructor capability and responsiveness, and comfort in the learning environment (e.g., Asoodar et al., 2016; Sebastianelli, Swift, & Tamimi, 2015). It is this last perspective, of students, upon which we focus.

It is important to note students do not sign up for online classes solely based on perceived quality. Perceptions of quality derive from notions of the capacity of online learning when ideal—relative to both learning achievement and satisfaction/enjoyment, and perceptions about the likelihood and experience of classes living up to expectations. Students also sign up because of convenience and flexibility, and personal notions of suitability about learning. Convenience and flexibility are enormous drivers of online registration (Lee, Stringer, & Du, 2017; Mann & Henneberry, 2012). Even when

students say they prefer face-to-face classes to online, many enroll in online classes and re-enroll in the future if the experience meets minimum expectations. This study examines the threshold expectations of students when they are considering taking online classes.

When discussing students' perceptions of quality, there is little clarity about the actual range of concepts because no integrated empirical studies exist comparing major factors found throughout the literature. Rather, there are practitioner-generated lists of micro-competencies such as the Quality Matters consortium for higher education (Quality Matters, 2018), or broad frameworks encompassing many aspects of quality beyond teaching (Open and Distant Learning Quality Council, 2012). While checklists are useful for practitioners and accreditation processes, they do not provide robust, theoretical bases for scholarly development. Overarching frameworks are heuristically useful, but not for pragmatic purposes or theory building arenas. The most prominent theoretical framework used in online literature is the Community of Inquiry (CoI) model (Arbaugh et al., 2008; Garrison, Anderson, & Archer, 2003), which divides instruction into teaching, cognitive, and social presence. Like deductive theories, however, the supportive evidence is mixed (Rourke & Kanuka, 2009), especially regarding the importance of social presence (Annand, 2011; Armellini and De Stefani, 2016). Conceptually, the problem is not so much with the narrow articulation of cognitive or social presence; cognitive presence is how the instructor provides opportunities for students to interact with material in robust, thought-provoking ways, and social presence refers to building a community of learning that incorporates student-to-student interactions. However, teaching presence includes everything else the instructor does—structuring the course, providing lectures, explaining assignments, creating rehearsal opportunities, supplying tests, grading, answering questions, and so on. These challenges become even more prominent in the online context. While the lecture as a single medium is paramount in face-to-face classes, it fades as the primary vehicle in online classes with increased use of detailed syllabi, electronic announcements, recorded and synchronous lectures, 24/7 communications related to student questions, etc. Amassing the pedagogical and technological elements related to teaching under a single concept provides little insight.

In addition to the CoI model, numerous concepts are suggested in single-factor empirical studies when focusing on quality from a student's perspective, with overlapping conceptualizations and nonstandardized naming conventions. Seven distinct factors are derived here from the literature of student perceptions of online quality: Instructional Support, Teaching Presence, Basic Online Modality, Social Presence, Online Social Comfort, cognitive Presence, and Interactive Online Modality.

Instructional support

Instructional Support refers to students' perceptions of techniques by the instructor used for input, rehearsal, feedback, and evaluation. Specifically, this entails providing detailed instructions, designed use of multimedia, and the balance between repetitive class features for ease of use, and techniques to prevent boredom. Instructional Support is often included as an element of Teaching Presence, but is also labeled "structure" (Lee & Rha, 2009; So & Brush, 2008) and instructor facilitation (Eom, Wen, & Ashill,

2006). A prime example of the difference between face-to-face and online education is the extensive use of the "flipped classroom" (Maycock, 2019; Wang, Huang, & Schunn, 2019) in which students move to rehearsal activities faster and more frequently than traditional classrooms, with less instructor lecture (Jung, 2011; Martin, Wang, & Sadaf, 2018). It has been consistently supported as an element of student perceptions of quality (Espasa & Meneses, 2010).

Teaching presence

Teaching Presence refers to students' perceptions about the quality of communication in lectures, directions, and individual feedback including encouragement (Jaggars & Xu, 2016; Marks et al., 2005). Specifically, instructor communication is clear, focused, and encouraging, and instructor feedback is customized and timely. If Instructional Support is what an instructor does before the course begins and in carrying out those plans, then Teaching Presence is what the instructor does while the class is conducted and in response to specific circumstances. For example, a course could be well designed but poorly delivered because the instructor is distracted; or a course could be poorly designed but an instructor might make up for the deficit by spending time and energy in elaborate communications and ad hoc teaching techniques. It is especially important in student satisfaction (Sebastianelli et al., 2015; Young, 2006) and also referred to as instructor presence (Asoodar et al., 2016), learner-instructor interaction (Marks et al., 2005), and staff support (Jung, 2011). As with Instructional Support, it has been consistently supported as an element of student perceptions of quality.

Basic online modality

Basic Online Modality refers to the competent use of basic online class tools—online grading, navigation methods, online grade book, and the announcements function. It is frequently clumped with instructional quality (Artino, 2010), service quality (Mohammadi, 2015), instructor expertise in e-teaching (Paechter, Maier, & Macher, 2010), and similar terms. As a narrowly defined concept, it is sometimes called technology (Asoodar et al., 2016; Bollinger & Martindale, 2004; Sun et al., 2008). The only empirical study that did not find Basic Online Modality significant, as technology, was Sun et al. (2008). Because Basic Online Modality is addressed with basic instructor training, some studies assert the importance of training (e.g., Asoodar et al., 2016).

Social presence

Social Presence refers to students' perceptions of the quality of student-to-student interaction. Social Presence focuses on the quality of shared learning and collaboration among students, such as in threaded discussion responses (Garrison et al., 2003; Kehrwald, 2008). Much emphasized but challenged in the CoI literature (Rourke & Kanuka, 2009), it has mixed support in the online literature. While some studies found Social Presence or related concepts to be significant (e.g., Asoodar et al., 2016; Bollinger & Martindale, 2004; Eom et al., 2006; Richardson, Maeda, Lv, & Caskurlu, 2017), others found Social Presence insignificant (Joo, Lim, & Kim, 2011; So & Brush, 2008; Sun et al., 2008).

Online social comfort

Online Social Comfort refers to the instructor's ability to provide an environment in which anxiety is low, and students feel comfortable interacting even when expressing opposing viewpoints. While numerous studies have examined anxiety (e.g., Liaw & Huang, 2013; Otter et al., 2013; Sun et al., 2008), only one found anxiety insignificant (Asoodar et al., 2016); many others have not examined the concept.

Cognitive presence

Cognitive Presence refers to the engagement of students such that they perceive they are stimulated by the material and instructor to reflect deeply and critically, and seek to understand different perspectives (Garrison et al., 2003). The instructor provides instructional materials and facilitates an environment that piques interest, is reflective, and enhances inclusiveness of perspectives (Durabi, Arrastia, Nelson, Cornille, & Liang, 2011). Cognitive Presence includes enhancing the applicability of material for student's potential or current careers. Cognitive Presence is supported as significant in many online studies (e.g., Artino, 2010; Asoodar et al., 2016; Joo et al., 2011; Marks et al., 2005; Sebastianelli et al., 2015; Sun et al., 2008). Further, while many instructors perceive that cognitive presence is diminished in online settings, neuroscientific studies indicate this need not be the case (Takamine, 2017). While numerous studies failed to examine Cognitive Presence, this review found no studies that lessened its significance for students.

Interactive online modality

Interactive Online Modality refers to the "high-end" usage of online functionality. That is, the instructor uses interactive online class tools—video lectures, videoconferencing, and small group discussions—well. It is often included in concepts such as instructional quality (Artino, 2010; Asoodar et al., 2016; Mohammadi, 2015; Otter et al., 2013; Paechter et al., 2010) or engagement (Clayton, Blumberg, & Anthony, 2018). While individual methods have been investigated (e.g. Durabi et al., 2011), high-end engagement methods have not.

Other independent variables affecting perceptions of quality include age, undergraduate versus graduate status, gender, ethnicity/race, discipline, educational motivation of students, and previous online experience. While age has been found to be small or insignificant, more notable effects have been reported at the level-of-study, with graduate students reporting higher "success" (Macon, 2011), and community college students having greater difficulty with online classes (Legon & Garrett, 2019; Xu & Jaggars, 2014). Ethnicity and race have also been small or insignificant. Some situational variations and student preferences can be captured by paying attention to disciplinary differences (Arbaugh, 2005; Macon, 2011). Motivation levels of students have been reported to be significant in completion and achievement, with better students doing as well across face-to-face and online modes, and weaker students having greater completion and achievement challenges (Clayton et al., 2018; Lu & Lemonde, 2013).

Research methods

Overview

To examine the various quality factors, we apply a critical success factor methodology, initially introduced to schools of business research in the 1970s. In 1981, Rockhart and Bullen codified an approach embodying principles of critical success factors (CSFs) as a way to identify the information needs of executives, detailing steps for the collection and analyzation of data to create a set of organizational CSFs (Rockhart & Bullen, 1981). CSFs describe the underlying or guiding principles which must be incorporated to ensure success.

Utilizing this methodology, CSFs in the context of this paper define key areas of instruction and design essential for an online class to be successful from a student's perspective. Instructors implicitly know and consider these areas when setting up an online class and designing and directing activities and tasks important to achieving learning goals. CSFs make explicit those things good instructors may intuitively know and (should) do to enhance student learning. When made explicit, CSFs not only confirm the knowledge of successful instructors, but tap their intuition to guide and direct the accomplishment of quality instruction for entire programs. In addition, CSFs are linked with goals and objectives, helping generate a small number of truly important matters an instructor should focus attention on to achieve different thresholds of online success.

After a comprehensive literature review, an instrument was created to measure students' perceptions about the importance of techniques and indicators leading to quality online classes. Items were designed to capture the major factors in the literature. The instrument was pilot studied during academic year 2017–18 with a 397 student sample, facilitating an exploratory factor analysis leading to important preliminary findings (reference withheld for review). Based on the pilot, survey items were added and refined to include seven groups of quality teaching factors and two groups of items related to students' overall acceptance of online classes as well as a variable on their future online class enrollment. Demographic information was gathered to determine their effects on students' levels of acceptance of online classes based on age, year in program, major, distance from university, number of online classes taken, high school experience with online classes, and communication preferences.

Sample

This paper draws evidence from a sample of students enrolled in educational programs at Jack H. Brown College of Business and Public Administration (JHBC), California State University San Bernardino (CSUSB). The JHBC offers a wide range of online courses for undergraduate and graduate programs. To ensure comparable learning outcomes, online classes and face-to-face classes of a certain subject are similar in size—undergraduate classes are generally capped at 60 and graduate classes at 30, and often taught by the same instructors. Students sometimes have the option to choose between both face-to-face and online modes of learning.

A Qualtrics survey link was sent out by 11 instructors to students who were unlikely to be cross-enrolled in classes during the 2018–19 academic year.[1] Approximately 2500 students were contacted, with some instructors providing class time to complete the anonymous survey. All students, whether they had taken an online class or not, were

encouraged to respond. Nine hundred eighty-seven students responded, representing a 40% response rate. Although drawn from a single business school, it is a broad sample representing students from several disciplines—management, accounting and finance, marketing, information decision sciences, and public administration, as well as both graduate and undergraduate programs of study.

The sample age of students is young, with 78% being under 30. The sample has almost no lower division students (i.e., freshman and sophomore), 73% upper division students (i.e., junior and senior) and 24% graduate students (master's level). Only 17% reported having taken a hybrid or online class in high school. There was a wide range of exposure to university level online courses, with 47% reporting having taken 1 to 4 classes, and 21% reporting no online class experience. As a Hispanic-serving institution, 54% self-identified as Latino, 18% White, and 13% Asian and Pacific Islander. The five largest majors were accounting & finance (25%), management (21%), master of public administration (16%), marketing (12%), and information decision sciences (10%). Seventy-four percent work full- or part-time. See Table 1 for demographic data.

Measures and procedure

To increase the reliability of evaluation scores, composite evaluation variables are formed after an exploratory factor analysis of individual evaluation items. A principle component method with Quartimin (oblique) rotation was applied to explore the factor construct of student perceptions of online teaching CSFs. The item correlations for student perceptions of importance coefficients greater than .30 were included, a commonly acceptable ratio in factor analysis. A simple least-squares regression analysis was applied to test the significance levels of factors on students' impression of online classes.

Results

Exploratory factor constructs

Using a threshold loading of 0.3 for items, 37 items loaded on seven factors. All factors were logically consistent. The first factor, with eight items, was labeled Teaching Presence. Items included providing clear instructions, staying on task, clear deadlines, and customized feedback on strengths and weaknesses. Teaching Presence items all related to instructor involvement during the course as a director, monitor, and learning facilitator. The second factor, with seven items, aligned with Cognitive Presence. Items included stimulating curiosity, opportunities for reflection, helping students construct explanations posed in online courses, and the applicability of material. The third factor, with six items, aligned with Social Presence defined as providing student-to-student learning opportunities. Items included getting to know course participants for sense of belonging, forming impressions of other students, and interacting with others. The fourth factor, with six new items as well as two ("interaction with other students" and "a sense of community in the class") shared with the third factor, was Instructional Support which related to the instructor's roles in providing students a cohesive learning experience. They included providing sufficient rehearsal, structured feedback, techniques for communication, navigation guide, detailed syllabus, and coordinating student

Table 1 Demographic Information of the Participants ($n = 987$)

	Freq.	Valid %[a]
Age		
< =22	406	42%
23–29	348	36%
29–34	105	11%
35–40	47	5%
> =41	72	7%
Year in Program		
Freshman	8	1%
Sophomore	11	1%
Junior	359	36%
Senior	363	37%
Other	5	1%
Graduate	241	24%
Had HD/OL classes in high school		
Yes	167	17%
No	811	83%
Number of HD/OL classes taken		
0	215	21%
1–2	272	27%
3–4	224	22%
5–6	158	15%
7 and above	154	15%
Race		
Latino	525	54%
White	175	18%
African American	60	6%
Asian Pacific Islander	128	13%
Other	90	9%
Major		
Accounting & Finance	242	25%
Management	207	21%
Marketing	118	12%
Public Administration	73	7%
Information Decision Sciences	96	10%
Other (non-business students)	11	1%
MBA	75	8%
MPA	160	16%
MSA	2	0%
Working Status		
Not working	260	27%
Part-time	357	37%
Full-time	361	37%

[a]Percent eliminating missing values

interaction and creating a sense of online community. This factor also included enthusiasm which students generally interpreted as a robustly designed course, rather than animation in a traditional lecture. The fifth factor was labeled Basic Online Modality and focused on the basic technological requirements for a functional online course. Three items included allowing students to make online submissions, use of online gradebooks, and online grading. A fourth item is the use of online quizzes, viewed by students as mechanical practice opportunities rather than small tests and a fifth is navigation, a key component of Online Modality. The sixth factor, loaded on four items, was labeled Online Social Comfort. Items here included comfort discussing ideas online, comfort disagreeing, developing a sense of collaboration via discussion, and considering online communication as an excellent medium for social interaction. The final factor was called Interactive Online Modality because it included items for "richer" communications or interactions, no matter whether one- or two-way. Items included videoconferencing, instructor-generated videos, and small group discussions. Taken together, these seven explained 67% of the variance which is considered in the acceptable range in social science research for a robust model (Hair, Black, Babin, & Anderson, 2014). See Table 2 for the full list.

To test for factor reliability, the Cronbach alpha of variables were calculated. All produced values greater than 0.7, the standard threshold used for reliability, except for system trust which was therefore dropped. To gauge students' sense of factor importance, all items were means averaged. Factor means (lower means indicating higher importance to students), ranged from 1.5 to 2.6 on a 5-point scale. Basic Online Modality was most important, followed by Instructional Support and Teaching Presence. Students deemed Cognitive Presence, Social Online Comfort, and Online Interactive Modality less important. The least important for this sample was Social Presence. Table 3 arrays the critical success factor means, standard deviations, and Cronbach alpha.

To determine whether particular subgroups of respondents viewed factors differently, a series of ANOVAs were conducted using factor means as dependent variables. Six demographic variables were used as independent variables: graduate vs. undergraduate, age, work status, ethnicity, discipline, and past online experience. To determine strength of association of the independent variables to each of the seven CSFs, eta squared was calculated for each ANOVA. Eta squared indicates the proportion of variance in the dependent variable explained by the independent variable. Eta squared values greater than .01, .06, and .14 are conventionally interpreted as small, medium, and large effect sizes, respectively (Green & Salkind, 2003). Table 4 summarizes the eta squared values for the ANOVA tests with Eta squared values less than .01 omitted.

While no significant differences in factor means among students in different disciplines in the College occur, all five other independent variables have some small effect on some or all CSFs. Graduate students tend to rate Online Interactive Modality, Instructional Support, Teaching Presence, and Cognitive Presence higher than undergraduates. Elder students value more Online Interactive Modality. Full-time working students rate all factors, except Social Online Comfort, slightly higher than part-timers and non-working students. Latino and White rate Basic Online Modality and Instructional Support higher; Asian and Pacific Islanders rate Social

Table 2 Critical Success Factor Loading[a]

Survey Items	Factor 1 Teaching Presence	Factor 2 Cognitive Presence	Factor 3 Social Presence	Factor 4 Instructional Support	Factor 5 Basic Online Modality	Factor 6 Online Social Comfort	Factor 7 Interactive Modality
Online instructor provides clear instructions on how to participate in course learning activities.	0.8165						
Online instructor helps keep the course participants on task in a way that helped me to learn.	0.7801						
Online instructor clearly communicates important due dates/time frames for learning activities.	0.7651						
Online instructor provides feedback that helped me understand my strengths and weaknesses relative to the course's goals and objectives.	0.7611						
Online instructor provides feedback in a timely fashion.	0.7293						
Online instructor clearly communicates important course goals.	0.6956						
Online instructor helps to focus discussion on relevant issues in a way that helped me to learn.	0.6379						
Online instructor encourages course participants to explore new concepts in this course.	0.6345						
Online course provide opportunities for meaningful reflection on course content		0.8525					
Online learning activities help me construct explanations/solutions in online courses.		0.8408					
Course activities stimulate my curiosity in online courses.		0.7206					
I can apply the knowledge created in online courses to my work or other non-class related activities.		0.6945					
I can utilize a variety of information sources to explore problems posed in online courses.		0.6628					
Online discussions are valuable in helping me appreciate different perspectives.		0.5518					
Posing problems in online courses increases my interest in course issues.		0.4220					
Getting to know other			0.7551				

Table 2 Critical Success Factor Loading[a] *(Continued)*

Survey Items	Factor 1 Teaching Presence	Factor 2 Cognitive Presence	Factor 3 Social Presence	Factor 4 Instructional Support	Factor 5 Basic Online Modality	Factor 6 Online Social Comfort	Factor 7 Interactive Modality
course participants gives me a sense of belonging in the course.							
I am able to form distinct impressions of other course participants.			0.6484				
interaction with other students			0.6390	0.3125			
a sense of community in the class			0.5509	0.4327			
Online or web-based communication is an excellent medium for social interaction.			0.5026			0.3080	
including student goals			0.3950				
sufficient rehearsal of material, skills to be learned, etc.				0.7241			
instructor providing feedback				0.6852			
instructor having enthusiasm				0.6610			
the use of a variety of techniques to communicate and learn				0.4724			
navigation (e.g., being able to find what you want)				0.4010	0.3227		
syllabus (more detailed than in a face-to-face class)				0.3546			
allowing students to make online submissions					0.8136		
online gradebook					0.7464		
online grading of assignments by instructors					0.7409		
online quizzes					0.3308		
I felt comfortable participating in the course discussions.						0.8816	
I felt comfortable disagreeing with other classmates in online courses while still maintaining a sense of trust.						0.8149	
Online discussions help me to develop a sense of collaboration.						0.5301	
Zoom or other videoconference methods							0.9238
video lectures							0.7540
small groups discussions (chat rooms)							0.4920

[a]Seven factors explain 67% of the variance. Decimal places and loadings less than .30 omitted

Table 3 Priorities of CSFs and Factor Reliability

Rank[a]	Critical Success Factors	# of Items	n	Mean	Std Dev	Cronbach's α
1	Basic Online Modality	5	818	1.4590	0.5521	0.7663
2	Instructional Support	8	816	1.6513	0.6403	0.8405
3	Teaching Presence	8	796	1.8270	0.7461	0.9233
4	Cognitive Presence	7	791	2.1715	0.7890	0.8957
5	Online Social Comfort	4	809	2.2464	0.9978	0.8602
6	Online Interactive Modality	3	818	2.2637	0.9892	0.7853
7	Social Presence	6	803	2.5571	0.9020	0.8611

[a] Ranking is based on the average mean of students' ranking importance of survey items: 1 = Very High, 2 = High, 3 = Neutral, 4 = Somewhat Low, and 5 = Very Low; Lower averages indicate greater importance

Presence higher. Students who have taken more online classes rate all factors higher.

In addition to factor scores, two variables are constructed to identify the resultant impressions labeled online experience. Both were logically consistent with a Cronbach's α greater than 0.75. The first variable, with six items, labeled "online acceptance," included items such as "I enjoy online learning," "My overall impression of hybrid/online learning is very good," and "the instructors of online/hybrid classes are generally responsive." The second variable was labeled "face-to-face preference" and combines four items, including enjoying, learning, and communicating more in face-to-face classes, as well as perceiving greater fairness and equity. In addition to these two constructed variables, a one-item variable was also used subsequently in the regression analysis: "online enrollment." That question asked: if hybrid/online classes are well taught and available, how much would online education make up your entire course selection going forward?

Table 4 Eta Squared Values for Significant ANOVAs

Independent Variables	Critical Success Factors (from most to least important)						
	Basic online modality	Instruct-ional support	Teaching presence	Cognitive presence	Online Social Comfort	Online interactive modality	Social presence
Graduate vs. *Undergraduate* Graduates rate these factors higher than undergraduates		0.01	0.01	0.01		0.05	
Age Elder students rate this factor higher						0.03	
Work Status Working students rate these factors higher	0.02	0.02	0.02	0.03		0.01	0.01
Ethnicity Latino and White rate basic online modality and instructional support higher; API rate social presence higher	0.02	0.03					0.03
Discipline No significant difference found across 5 disciplines							
Online Experience Students who have taken more online classes rate all these factors higher	0.02	0.01	0.03	0.03	0.01	0.01	0.01

Eta Squared> 0.01 small effect, Eta Squared> 0.06 medium effect, Eta Squared> 0.14 large effect

Regression results

As noted above, two constructed variables and one item were used as dependent variables for purposes of regression analysis. They were online acceptance, F2F preference, and the selection of online classes. In addition to seven quality-of-teaching factors identified by factor analysis, control variables included level of education (graduate versus undergraduate), age, ethnicity, work status, distance to university, and number of online/hybrid classes taken in the past. See Table 5.

When the ETA squared values for ANOVA significance were measured for control factors, only one was close to a medium effect. Graduate versus undergraduate status had a .05 effect (considered medium) related to Online Interactive Modality, meaning graduate students were more sensitive to interactive modality than undergraduates. Multiple regression analysis of critical success factors and online impressions were conducted to compare under what conditions factors were significant. The only consistently significant control factor was number of online classes taken. The more classes students had taken online, the more inclined they were to take future classes. Level of

Table 5 Description of Variables

	Description
Dependent Variable	
Online Acceptance	Minus log sum of 1(strongly agree) to 5 (strongly disagree) rating of 6 items (Cronbach's α = 0.8002): • I enjoy online learning. • My overall impression of hybrid/online learning is very good. • I often speak or communicate to others in online classes. • The instructors of online/hybrid classes are generally responsive. • Instructors reduce and catch cheating effectively in hybrid/online classes. • I am comfortable with online learning technologies.
F2F Preference	Minus log sum of 1(strongly agree) to 5 (strongly disagree) rating of 4 items (Cronbach's α = 0.7525) • I enjoy face-to-face classes more. • I learn more in face-to-face classes. • I often speak or communicate to others in face-to-face classes. • I think that fairness and equity is better in face-to-face classes.
Selection Online Class	Log percent online class selection going forward
Independent Variables	
Undergraduate (vs. graduate)	Graduate (1) vs. Undergraduate (0)
Age	Log year of age
Race	White (1), African American (2), API (3), Latino (4), and Other (5)
Work Status	Full Time (2), Part Time (1), Not Work (0)
Distance to University	Log number of miles away from campus
Number of HD/OL Classes Taken	Log number of classes taken
Basic Online Modality	Minus Factor score
Instructional Support	Minus Factor score
Teaching Presence	Minus Factor score
Cognitive Presence	Minus Factor score
Online Social Comfort	Minus Factor score
Interactive Modality	Minus Factor score
Social Presence	Minus Factor score

program, age, ethnicity, and working status do not significantly affect students' choice or overall acceptance of online classes.

The least restrictive condition was online enrollment (Table 6). That is, students might not feel online courses were ideal, but because of convenience and scheduling might enroll in them if minimum threshold expectations were met. When considering online enrollment three factors were significant and positive (at the 0.1 level): Basic Online Modality, Cognitive Presence, and Online Social Comfort. These least-demanding students expected classes to have basic technological functionality, provide good opportunities for knowledge acquisition, and provide comfortable interaction in small groups. Students who demand good Instructional Support (e.g., rehearsal opportunities, standardized feedback, clear syllabus) are less likely to enroll.

Online acceptance was more restrictive (see Table 7). This variable captured the idea that students not only enrolled in online classes out of necessity, but with an appreciation of the positive attributes of online instruction, which balanced the negative aspects. When this standard was applied, students expected not only Basic Online Modality, Cognitive Presence, and Online Social Comfort, but expected their instructors to be highly engaged virtually as the course progressed (Teaching Presence), and

Table 6 Summary of Multiple Regression Analysis: Online Class Enrollment

Analysis of Variance	**Online Class Enrollment**			
Source	**DF**	**Sum of Squares**	**Mean square**	**F Ratio**
Model	17	80.62	4.74	12.51
Error	686	260.15	0.38	**Prob > F**
C. Total	703	340.77		<.0001
Parameter Estimates				
Term	**Estimate**	**Std Error**	**t Ratio**	**Prob > |t|**
Intercept	3.66	0.08	44.19	<.0001***
Undergraduate (vs. graduate)	−0.02	0.03	−0.59	0.5546
Age	−0.04	0.06	−0.67	0.5000
African American (vs. White)	−0.08	0.08	−0.98	0.3297
Asian Pacific Islander (vs. White)	0.19	0.07	2.85	0.0045***
Latino (vs. White)	0.04	0.04	0.89	0.3752
Other Race (vs. White)	−0.12	0.07	−1.66	0.0978*
Nonworking (vs. full-time working)	0.06	0.04	1.58	0.1149
Nonworking (vs. part-time working)	−0.03	0.04	−0.69	0.4928
Distance to University	0.03	0.02	1.31	0.1922
Number of HD/OL Classes Taken	0.19	0.03	5.69	<.0001***
Basic Online Modality	0.08	0.03	2.45	0.0144**
Instructional Support	−0.10	0.03	−3.03	0.0026***
Teaching Presence	0.00	0.04	0.12	0.9023
Cognitive Presence	0.20	0.04	4.95	<.0001***
Online Social Comfort	0.06	0.03	1.65	0.0997*
Interactive Modality	0.00	0.03	−0.05	0.9591
Social Presence	0.04	0.03	1.24	0.2136

*$p < .10$, **$p < .05$, ***$p < .01$

Table 7 Summary of Multiple Regression Analysis: Online Class Acceptance

Analysis of Variance	**Online Acceptance**			
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Ratio**
Model	17	37.19	2.19	37.97
Error	693	39.93	0.06	**Prob > F**
C. Total	710	77.13		<.0001
Parameter Estimates				
Term	**Estimate**	**Std Error**	**t Ratio**	**Prob > |t|**
Intercept	−2.61	0.03	−81.27	<.0001***
Undergraduate (vs. graduate)	0.00	0.01	−0.17	0.8672
Age	−0.01	0.02	− 0.50	0.6194
African American (vs. White)	−0.03	0.03	−1.07	0.2847
Asian Pacific Islander (vs. White)	0.03	0.03	0.98	0.3260
Latino (vs. White)	0.02	0.02	1.17	0.2414
Other Race (vs. White)	−0.02	0.03	−0.84	0.3992
Nonworking (vs. full-time working)	0.00	0.01	−0.06	0.9516
Nonworking (vs. part-time working)	0.00	0.02	−0.16	0.8714
Distance to University	0.00	0.01	−0.60	0.5516
Number of HD/OL Classes Taken	0.06	0.01	4.48	<.0001***
Basic Online Modality	0.05	0.01	4.05	<.0001***
Instructional Support	−0.05	0.01	−3.96	<.0001***
Teaching Presence	0.07	0.01	5.15	<.0001***
Cognitive Presence	0.11	0.02	6.77	<.0001***
Online Social Comfort	0.05	0.01	3.80	0.0002***
Interactive Modality	0.01	0.01	0.53	0.5972
Social Presence	0.06	0.01	4.61	<.0001***

***$p < .01$

to create strong student-to-student dynamics (Social Presence). Students who rated Instructional Support higher are less accepting of online classes.

Another restrictive condition was catering to the needs of students who preferred face-to-face classes (see Table 8). That is, they preferred face-to-face classes even when online classes were well taught. Unlike students more accepting of, or more likely to enroll in, online classes, this group rates Instructional Support as critical to enrolling, rather than a negative factor when absent. Again different from the other two groups, these students demand appropriate interactive mechanisms (Online Interactive Modality) to enable richer communication (e.g., videoconferencing). Student-to-student collaboration (Social Presence) was also significant. This group also rated Cognitive Presence and Online Social Comfort as significant, but only in their absence. That is, these students were most attached to direct interaction with the instructor and other students rather than specific teaching methods. Interestingly, Basic Online Modality and Teaching Presence were not significant. Our interpretation here is this student group, most critical of online classes for its loss of physical interaction, are beyond being concerned with mechanical technical interaction and demand higher levels of interactivity and instructional sophistication.

Table 8 Summary of Multiple Regression Analysis: F2F Preference

Analysis of Variance	**F2F Preference**			
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Ratio**
Model	17.00	19.35	1.1384	9.36
Error	693.00	84.25	0.12158	**Prob > F**
C. Total	710.00	103.60		<.0001
Parameter Estimates				
Term	**Estimate**	**Std Error**	**t Ratio**	**Prob > |t|**
Intercept	−2.10	0.05	−44.99	<.0001***
Undergraduate (vs. graduate)	0.03	0.02	1.36	0.1729
Age	0.02	0.03	0.77	0.4417
African American (vs. White)	−0.01	0.05	−0.19	0.8460
Asian Pacific Islander (vs. White)	0.01	0.04	0.23	0.8174
Latino (vs. White)	−0.04	0.02	−1.52	0.1300
Other Race (vs. White)	0.04	0.04	0.89	0.3733
Nonworking (vs. full-time working)	0.03	0.02	1.58	0.1147
Nonworking (vs. part-time working)	−0.03	0.02	−1.49	0.1355
Distance to University	0.00	0.01	0.00	0.9997
Number of HD/OL Classes Taken	−0.11	0.02	−5.63	<.0001***
Basic Online Modality	0.01	0.02	0.74	0.4583
Instructional Support	0.07	0.02	3.83	0.0001***
Teaching Presence	−0.03	0.02	−1.35	0.1759
Cognitive Presence	−0.06	0.02	−2.68	0.0076***
Online Social Comfort	−0.06	0.02	−3.28	0.0011***
Interactive Modality	0.03	0.02	1.68	0.0937*
Social Presence	0.08	0.02	4.10	<.0001***

*$p < .10$, **$p < .05$, ***$p < .01$

Discussion and study limitations

Some past studies have used robust empirical methods to identify a single factor or a small number of factors related to quality from a student's perspective, but have not sought to be relatively comprehensive. Others have used a longer series of itemized factors, but have less used less robust methods, and have not tied those factors back to the literature. This study has used the literature to develop a relatively comprehensive list of items focused on quality teaching in a single rigorous protocol. That is, while a Beta test had identified five coherent factors, substantial changes to the current survey that sharpened the focus on quality factors rather than antecedent factors, as well as better articulating the array of factors often lumped under the mantle of "teaching presence." In addition, it has also examined them based on threshold expectations: from minimal, such as when flexibility is the driving consideration, to modest, such as when students want a "good" online class, to high, when students demand an interactive virtual experience equivalent to face-to-face.

Exploratory factor analysis identified seven factors that were reliable, coherent, and significant under different conditions. When considering students' overall sense of importance, they are, in order: Basic Online Modality, Instructional Support, Teaching Presence, Cognitive Presence, Social Online Comfort, Interactive Online Modality, and

Social Presence. Students are most concerned with the basics of a course first, that is the technological and instructor competence. Next they want engagement and virtual comfort. Social Presence, while valued, is the least critical from this overall perspective.

The factor analysis is quite consistent with the range of factors identified in the literature, pointing to the fact that students can differentiate among different aspects of what have been clumped as larger concepts, such as teaching presence. Essentially, the instructor's role in quality can be divided into her/his command of basic online functionality, good design, and good presence during the class. The instructor's command of basic functionality is paramount. Because so much of online classes must be built in advance of the class, quality of the class design is rated more highly than the instructor's role in facilitating the class. Taken as a whole, the instructor's role in traditional teaching elements is primary, as we would expect it to be. Cognitive presence, especially as pertinence of the instructional material and its applicability to student interests, has always been found significant when studied, and was highly rated as well in a single factor. Finally, the degree to which students feel comfortable with the online environment and enjoy the learner-learner aspect has been less supported in empirical studies, was found significant here, but rated the lowest among the factors of quality to students.

Regression analysis paints a more nuanced picture, depending on student focus. It also helps explain some of the heterogeneity of previous studies, depending on what the dependent variables were. If convenience and scheduling are critical and students are less demanding, minimum requirements are Basic Online Modality, Cognitive Presence, and Online Social Comfort. That is, students' expect an instructor who knows how to use an online platform, delivers useful information, and who provides a comfortable learning environment. However, they do not expect to get poor design. They do not expect much in terms of the quality teaching presence, learner-to-learner interaction, or interactive teaching.

When students are signing up for critical classes, or they have both F2F and online options, they have a higher standard. That is, they not only expect the factors for decisions about enrolling in noncritical classes, but they also expect good Teaching and Social Presence. Students who simply need a class may be willing to teach themselves a bit more, but students who want a good class expect a highly present instructor in terms responsiveness and immediacy. "Good" classes must not only create a comfortable atmosphere, but in social science classes at least, must provide strong learner-to-learner interactions as well. At the time of the research, most students believe that you can have a good class *without* high interactivity via pre-recorded video and videoconference. That may, or may not, change over time as technology thresholds of various video media become easier to use, more reliable, and more commonplace.

The most demanding students are those who prefer F2F classes because of learning style preferences, poor past experiences, or both. Such students (seem to) assume that a worthwhile online class has basic functionality and that the instructor provides a strong presence. They are also critical of the absence of Cognitive Presence and Online Social Comfort. They want strong Instructional Support and Social Presence. But in addition, and uniquely, they expect Online Interactive Modality which provides the greatest verisimilitude to the traditional classroom as possible. More than the other two groups, these students crave human interaction in the learning process, both with the instructor and other students.

These findings shed light on the possible ramifications of the COVID-19 aftermath. Many universities around the world jumped from relatively low levels of online instruction in the beginning of spring 2020 to nearly 100% by mandate by the end of the spring term. The question becomes, what will happen after the mandate is removed? Will demand resume pre-crisis levels, will it increase modestly, or will it skyrocket? Time will be the best judge, but the findings here would suggest that the ability/interest of instructors and institutions to "rise to the occasion" with quality teaching will have as much effect on demand as students becoming more acclimated to online learning. If in the rush to get classes online many students experience shoddy basic functional competence, poor instructional design, sporadic teaching presence, and poorly implemented cognitive and social aspects, they may be quite willing to return to the traditional classroom. If faculty and institutions supporting them are able to increase the quality of classes despite time pressures, then most students may be interested in more hybrid and fully online classes. If instructors are able to introduce high quality interactive teaching, nearly the entire student population will be interested in more online classes. Of course students will have a variety of experiences, but this analysis suggests that those instructors, departments, and institutions that put greater effort into the temporary adjustment (and who resist less), will be substantially more likely to have increases in demand beyond what the modest national trajectory has been for the last decade or so.

There are several study limitations. First, the study does not include a sample of non-respondents. Non-responders may have a somewhat different profile. Second, the study draws from a single college and university. The profile derived here may vary significantly by type of student. Third, some survey statements may have led respondents to rate quality based upon experience rather than assess the general importance of online course elements. "I felt comfortable participating in the course discussions," could be revised to "comfort in participating in course discussions." The authors weighed differences among subgroups (e.g., among majors) as small and statistically insignificant. However, it is possible differences between biology and marketing students would be significant, leading factors to be differently ordered. Emphasis and ordering might vary at a community college versus research-oriented university (Gonzalez, 2009).

Acknowledgements
None.

Authors' contributions
Equal. The author(s) read and approved the final manuscript.

Funding
No external funding/ NA.

Availability of data and materials
We will make the data available.

Competing interests
We have no competing interests.

Received: 29 April 2020 Accepted: 30 July 2020
Published online: 02 December 2020

References

Al-Gahtani, S. S. (2016). Empirical investigation of e-learning acceptance and assimilation: A structural equation model. *Applied Comput Information, 12*, 27–50.

PROJECT
(Professional Journal of English Education)
Volume 4, No. 1, January 2021
p–ISSN 2614-6320
e–ISSN 2614-6258

EXPLORING PARENTS' HOME-BASED INVOLVEMENT IN THEIR CHILDREN'S ENGLISH LEARNING: TRIGGERS AND BARRIERS

Cicilia Siwi Triutami[1], Retno Muljani[2]

Sanata Dharma University, Yogyakarta
[1] siwicicilia@gmail.com, [2] retnomuljani@usd.ac.id

Abstract

In Indonesian context, English has been taught in elementary school level and parents' involvement is considered as one of the influencing factors which has contribution to the children's language learning achievement. The rapid, complex and continuous societal changes in this digital era might impact and alter the possibilities of parents' involvement in their children's language learning. The current study explored the triggers and the barriers of parents' home-based involvement in their children's English language learning and the features of their involvement. The qualitative research by implementing semi-structured, in- depth interview with four parents of elementary students at one of private schools in Yogyakarta city was conducted. The findings show the three main triggers in parents' home-based involvement namely: (1) parents' belief of the importance of English, (2) the implementation of school technological learning tools and (3) parents' expectation of their children academic achievement. While the barriers that parents encounter in their involvement are: (1) parents' lack of time, (2) parents' unproficiency in English and (3) parents' unfamiliarity with the use of technological tools. As the features of involvement, the study reveals parents' monitoring, accompaniment, assistances in their children's home-learning activities, providing some additional English learning media and financing English private course.

Keywords: Barriers, Children's English Language Learning, Parents' Home-Based Involvement, Triggers

INTRODUCTION

Since English has been globally used, it has significant roles in many human's domains, such as education, culture, politics, industry and ICT. Moreover, many countries have begun to introduce English teaching as a foreign language at an earlier level in the curriculum (Butler, 2014). In the Indonesian context, English as a foreign language has been taught at the primary school level due to the revision of 1994 curriculum. Accordingly, Indonesian students can start to learn English at their young age, elementary school level, in which there are some factors that affect the success of the language learning achievement. Parents' involvement has become one of the influencing factors for young children in language learning as it can provide motivation and encouragement during the processes (Hosseinpour, 2015; Rahman, 2015). Nevertheless, the rapid, complex and continuous societal changes in this digital era might impact and alter the possibilities of the triggers, barriers and features in parents' involvement.

Parents' involvement can be defined as the dedication of the parents' resources to their children. It is a multidimensional structure which consists of parents's educational desires, parents' decisions and plans for their children, and indeed, their engagement in children's school tasks (Ule, Živoder, & Bois-reymond, 2015). Parents' participation in their children's education processes can be categorized into school-based and home-based involvement (Jeynes, 2007 as

cited in Dewi et al., 2017). Parents' home-based involvement covers providing the supportive environment, stimulating children's s intellectual stimulation, supervising homework completion and parent-children discussion (Benner et al., 2016). Meanwhile, parents' school-based involvement includes the activities that parents undertake regarding to their participation in school organizations and also in other school events (Benner et al., 2016). Furthermore, Poyraz, (2017); Jafarov, (2015) and Larocque et al., (2011) assert that some aspects such as socio-economic situation and parents' educational experience can affect parents' involvement in their children language learning. Additionally, children's age contributes great influence on parents' activeness in their children's English language learning since it will decrease as children grade levels increase (Hornby & Lafaele, 2011; Poyraz, 2017)

School's learning platform technologies are considered to increase parental involvement since these tools provide parents an access to gain information and resources related to their children's education as well as to support and review their children learning (Selwyn et al., 2011; Willis & Exley, 2018). Research has shown that children's outcomes including behaviour, attendance, well being and academic achievement improve when parents highly get involved in their learning processes (Povey et al., 2016; Wilder, 2014) Moreover, the learning platform technologies are utilized to ensure the learning continuity by replicating the learning environment at home due to extreme learning conditions such as school closure. (Selwyn et al., 2011). However, the inability of parents to access the technological tools can be one of the obstacles (Goodall, 2017) and some parents regard learning platform merely just as an additional burden for them (Poyraz, 2017). Additionally, (Jafarov, 2015) states that parents lack of time can be one of problems in parental involvement.

Parents' involvement might also been triggered by their perception and belief of the importance of the language learning (Dewi et al., 2017; Mosty & Lefever, 2013). Several researches reveal that English is perceived by most parents as a crucial language which their children need to acquire and it becomes more essential than for the parents themselves (Xiaoyi, 2017). Similarly, Wei (2011) discovers that both bilingual education and non-bilingual education parents view English as the important feature for their children future life. This perspective supports Fiszbein & Stanton (2018) who consider learning at early childhood as a necessary investment. In addition, parents believe that learning foreign language can increase their children's self-image and confidence (Lin, Ching-Ying & Chen, 2016). Mastering English will also support children in learning more knowledge as well as accessing a lot of information (Reddy & English, 2016). Further, it will help them to achieve more understanding and capability in applying technology in this digital era because most of internet sites use English as the language instruction.

Castillo & Gamez (2013) as citied in Shelor (2016) suggests parents to play critical roles in supporting children to develop their language learning at home. It can be implemented by providing various learning media as it is commonly perceived that children learning language by doing something interesting through their five senses (Brown, 2007). Additionally, Fatt (2000) argues that visual aids: pictures, flash cards, books, games and printed materials can help children learn language as well as build their creative thinking through what they see. Meanwhile, Brannon, Dauksas, Coleman, Israelson, & Williams (2013) reveal that literacy home activities such as dialog reading and shared reading have been examined to be beneficial in English language learning. On the other hand, Kayalar & Kayalar (2017) investigate that auditory learning can be both determinative and significative for effective language learning. While, audio-visual media such as television, video, YouTube, computer and films are claimed to be more attractive for children since they can listen and watch at the same time (Idris et al.,

2018). Accordingly, Shyamlee & Phil (2012) state that audio-visual can stimulate children building their analytical, creative and productive skills.

There are always some challenges when dealing with children learn second language compared with adults as their cognitive and linguistic are still immature (Xiaoyi, 2017). Children are unlike adults who usually use their abstract and logical ways in processing the knowledge of language because they take less anxiety in learning second language (Gürsoy & Akin, 2013). The low level of parents' education can be the factor which leads to their less involvement in their children language acquisition since they are not confident enough to use English for communication (Poyraz, 2017). Nevertheles, Castillo & Gamez (2013) as citied in Shelor (2016) describes how non-native parents may involve in the process of children second language acquisition by giving an analogy that to teach children ride a bike parents do not necessarily have to be able to ride a bike. It is in line with Xuesong (2006) who discovered that parents kept on assisting their children's learning although they didn't master English.

Some previous studies related to the parents' involvement in their children's English language learning have been conducted. The first study was carried out by Xuesong (2006) to investigate parents' involvement in a group of students from urban China. The results indicated that parents played a significant role in their children's English learning. Parents exposed the English language to their children with some strategies such as giving continues encouragement in learning English, providing English learning in TV program and financing children for English course. Another study was undertaken by Xiaoyi (2017) to explore how parents involved in children's learning in an English center in China. The results of the research revealed that in the context of English training center, parents got involved in their children's English learning by asking their children about their learning, accompanying and supervising homework, building communication with teachers, joining school activities and administering for extra-curricular courses. Additionally, Poyraz (2017) undertook a research on parents' involvement in their children's home-based English activities and the result showed that their awareness of the importance of the involvement increase as they have higher education level.

In Indonesian context, English has been taught at the elementary school level as a foreign language. As a result, Indonesian students begin to learn English at their young age. In this case, parents play significant role to provide continual encouragement and motivation to their children's English language learning (Daniel et al., 2018). However, the rapid, complex and continuous societal changes in this digital era might impact and alter the possibilities related to the parents' involvement. Based on this background, the current study attempted to explore the triggers and barriers of parents' home-based involvement in their children's English language learning and also to find out the features of their involvement. The qualitative research by implementing semi-structured, in- depth interview with four parents of elementary school students at one of private schools in Yogyakarta city was conducted. In order to meet the objectives, the research questions were formulated:

1. What are the triggers and barriers of the parents' home-based involvement in their children's English language learning?
2. How do parents involve themselves in their children's English language learning activities?

METHOD

This study aimed at exploring the parents' home-based involvement in their children's English

language learning. The researchers collected the data by employing qualitative descriptive that enabled the researchers to gain rich data of parents' feeling, thoughts, perspectives, and experiences regarding to the research topic (Seidman 2006; Creswell 2014), and examined the data to provide a description of their home based involvement in their children's English learning.

Purposive sampling was chosen by the researcher to select the sample of participants. The four selected participants were the mothers of elementary school students at one of the private schools in Yogyakarta city which has implemented some technological learning tools. The female parents were chosen since parent's gender can be one of the contributing factors in parental involvement level (Feuerstein & Feuerstein, 2010; Jafarov, 2015). In this case, mothers might spend more time dealing with their children's home learning activity (Jordan et al., 2002). The background of children age, 6.5 – 8.5 years old, became another consideration as it is in accordance with Hornby & Lafaele (2011); Jafarov (2015) and Poyraz (2017) who reveal that students' age has been an issue affecting the level of parental involvement in which it will decrease in upper grades. In addition, some other parents' background in terms of occupation and educational level were also considered in the selection in order to gain a broad range of perspectives. According to Poyraz (2017), parents' various background might affect the parental involvement. The parent-participants various background is displayed in the following table:

Background	Parent 1 (P1)	Parent 2 (P2)	Parent 3 (P3)	Parent 4 (P4)
Gender	Female	Female	Female	Female
Occupation	Dentist	Lecturer	House wife	Plant Seller
Educational level	Bachelor of Dentistry	Post Graduate	High school	High school
Children's age	6,5	7	7.5	8,5
Children's grade	1st grader	2nd grader	2nd grader	3rd grader

In order to gain the data the researchers did the interview and recorded it. The semi-structured, in- depth interview was implemented in this study since it is one of the instruments that can be used in to gather the data in a qualitative research (Gopaldas, 2016; Levitt et al., 2017). Based on consideration of the theoretical background of the research topic (Kvale, 2007) to process the analyzing interview, the main concepts of the theoretical background were concisely categorized in order to formulate the interview questions. Accordingly, the researchers developed some questions based on the theoretical categories. In reference to Lin, Ching-Ying & Chen (2016); Mosty & Lefever, (2013); Povey et al., (2016); Reddy & English (2016); Selwyn et al., (2011); Wei, (2011); Wilder, 2014; Willis & Exley (2018); M. Xiaoyi (2017), the researchers asked the participants about the triggers of their involvement. Additionally, the researcher focused on asking the participants the barriers of their involvement (Goodall, 2017; Jafarov, 2015; Poyraz, 2017; Xuesong, 2006).

Finally, in accordance to Benner et al., (2016) the researcher asked the participants the features of their involvement in their children's English language learning. The interview questions were formulated in the following table.

No	Categories	Questions
1.	The triggers of parents' involvement	1. What is your perception/belief of English language learning? Does it trigger your involvement in your children's English language learning? Please share your experience. 2. How do the technological learning tools that are implemented by the school impact your involvement? Please share your experience. 3. Do you have expectations of your children academic achievement? Do they influence your home-based involvement? Please share your experience.
2.	The barriers of parents' involvement	4. Do you have sufficient time in your parental home-based involvement? 5. Do you encounter barriers in your involvement in your children language learning which related to socio-economic situation? Please share your experience. 6. Does your level of English ability become an obstacle to get involved in your children language learning? Please share your experience. 7. Do you find impediments in your involvement related to the school implementation of technological learning tools?
3.	The features of parents' involvement	8. How do you involve yourself in your children's English language learning? 9. Do you provide some learning media for your children's English language learning? Please share your experience.

Table 2

Finally, after collecting data the researcher did transcribing, describing, and deep analyzing the data in order to code them into some inter-related categories. Three main categories which emerged were the triggers of parents' home-based involvement, the barriers of parents' home-based involvement and the features of parental home-based involvement.

RESULTS AND DISCUSSION

Results

The Triggers of Parents' Home-Based involvement

The data reveals that there are some triggers in parents' home-based involvement. Parent 1 believed that learning English was very valuable for her daughter since she thought that her child needed to be equipped with English proficiency in consideration of the status of English as an international language. This belief had been a trigger for her to support her daughter in learning English. Moreover, she perceived that home-based parental involvement was crucial for her daughter more specially when dealing with new English learning platforms. She expected that her involvement could enhance her daughter's academic achievement:

> *"In my view English has been an international language and it becomes a trigger for everyone to have a capability in English. That's why I always support my daughter to learn English as I know how important English is. I believe if my daughter is proficient in English, it will be very useful for her future. Furthermore, I believe that parents'*

> *home-based involvement is crucial for my daughter, more specially now she has to deal with some digital learning platforms in learning English at home such as Google Meet, Google classroom, YouTube and some online English exercises. Of course, these new learning platforms really need more parents' involvement because my daughter is still 6 years old. I hope that I can help her to enhance her academic achievement".* (Parent 1)

Similarly, Parent 2 perceived English as the international language for going global and it was very important to be learned by her kid for successful communication. Further, based on her view home-based parental involvement was significant for her daughter's learning progress in English and it became more demanding due to the use of technological platforms in learning.

> *"In my view English is the International language, it is the language for going global. I encourage and support my daughter to love English because English is one of the important elements for successful communication. I have set goals for her specially related to her English learning attainment. I hope that she will be able to understand, to communicate as well as be familiar with it. I value that when I get involved in my kid' home learning, it will be significant and it will be an encouragement for her. Regularly I try to give consistent assist to my daughter' in completing any English tasks, more specially, now there some changes in educational learning system where she has to attend any virtual classes including English which, of course, it requires more parents' involvement.* (Parent 2)

Parent 3 viewed that learning English was important for her child to have better future. Also, she perceived that home-based parents' involvement was beneficial for her kid to gain learning progress and academic achievement. She always tried her best to get involved in her kid's English learning specially when her kid dealt with some technological tools utilized by the school:

> *"I believe English is very important to be learned by my child because it will help him to be able to compensate in the development of this increasingly advanced era. More specially it will be useful for his future careers as they have a "plus value" (English competence) and the opportunity to be successful is wide open. I hope that my child will get the better future than us (his parents). in my opinion, parents' support and engagement in children learning will be meaningful for them because parents must be the ones who understand them most. For me personally, as a full- time house wife, I always have time to get involved in my son's English home learning. Moreover, the school implementation of some digital tools in learning requires me to get involved as the learning activities mostly held at home."*(Parent 3)

Meanwhile, Parent 4 stated that it was important to learn English to be able deal with digital technology for gaining knowledge. In her perception, children could get their best attainment in learning if there was a consistent support from their parents since they still depended on their parents. Additionally, she believed that the changes of learning deliverance using digital tools really called for more parents' involvement. However, in her view, not all parents were ready for the changes, including she herself due to some factors:

> *"I believe that English is important to be learned by son because this modern era has required everyone to be able to communicate in English as well as to gain knowledge using digital technology. I observe that recently my child always learns his school lessons by using any digital platforms such us Zoom, YouTube and any online exercises*

> *which mostly using English. Of course, this phenomenon has called for parents to get involved more in children home learning. However, I think not all of parents are ready to deal with this change including me myself due to some factors."* (Parent 4)

The data above shows that parents have some triggers in their parental home-based involvement in their children's English language learning. The first trigger is parents' belief of the importance of English. They perceive that English, as international language, is important to be learned by their children. Furthermore, they view that their children need to be proficient in English in order to support them in achieving their successful future careers and also to equip them in gaining knowledge and information through digital technology which mostly using English. While, the second trigger is the school implementation of technological learning tools which requires more parents' involvement. The children still depend on their parents to deal with technological tools in learning. Finally, the third trigger is parents' expectation of their children academic achievement. They expect that their involvement will enhance their children best attainment in learning.

The Barriers of Parents' Home-Based Involvement

The data reveals that parents still encounter with some barriers in their parental home-based involvement. Parent 1 said that her impediment was related to the lack of time availability to accompany her child doing home learning due to her job as a dentist, however, she was able to deal with this problem:

> "*Unfortunately, due to my job as a dentist I cannot always assist my daughter in her home learning. To deal with this situation I often ask for my mom (her grandma) and her private teacher to help me accompany my daughter in her home learning. Also, I always monitor my daughter's learning through phone call or video call*." (parent 1)

While parent 3 stated that her unproficiency in English had been her barrier in her involvement:

> "*I think my kid mostly still needs me to assist him engaging in his English lesson specially to understand the learning topic, to complete any English tasks and also to have tests preparation. Honestly, I still have obstacle in assisting my kid's English learning since I am not proficient and not fluent in English yet I hope that my kid will have better English competence than me. I try best to assist my kid's learning in spite of my obstacles*." (Parent 3)

Parent 4 believed that getting involved in her kid's home learning activities was really needed, however, she had very limited time for assisting her kid's English home learning due to the family socio-economic situation in which she had to make money outside home. The unfamiliarity in using technological tools also had been another impediment that she encountered.

> "*Personally, I believe that fully getting involved in my kid's English learning is very demanding specially when dealing with any online tasks. I think in his age, my kid still needs my accompaniment in completing her English tasks. However, it becomes dilemma for me since at the same time my husband and me have to earn money by going around selling plants. We have limited time to assist our daughter to do her home learning tasks. As a result, sometime my daughter could not submit her learning*

> *tasks on time. The unfamiliarity of using technological tools also becomes the other obstacles. It is hard me to be fully involved in my kid's home learning process.*" (Parent 4)

The data above reveals barriers that parents encounter in their home-based involvement. Those are related to parents' lack of time, parents' unproficiency in English and parents' unfamiliarity with the use of technological tools.

The Features of Parents' Home-Based Involvement

Parent 1 dedicated her efforts to get involved in her daughter' English learning by monitoring her English learning activities, providing some fun media though videos and also financing the private course.

> "*Even though I can't always be at home to accompany my daughter's learning but I try to be regularly getting involved in my daughter's English home learning activities, such as monitoring her English tasks completion, rechecking her homework, having discussion with my daughter, preparing her test material and compiling all of her English material files in a folder. We also finance our daughter a private English course to support her acquiring English. Additionally, I provide some fun English learning media to enhance her daughter's English ability through videos."* (Parent 1)

Similarly, parent 2 provided guidance and accompaniment for her kid's English home learning as well as additional English learning media in which her kid would be able to practice English both written and oral English.

> "*I usually talk to them in English with simple words/sentences, and encourage them to practice periodically so that English becomes a familiar language at home. I support them with English story books, and I usually read aloud when reading it so that they are familiar to listen to English story and English vocabulary as well. I provide both of my children additional English learning media at the English course where they can have more access to learn and practice English both written and oral English. I usually encourage my children to do their homework or tasks by themselves, then I check their works after completing. It is the time when I give them inputs so that they know their competence to improve."* (Parent 2)

Even though Parent 3 was not fluent in English but she kept on accompanying her son to accomplish his English school assignments and provided internet access to find some supporting learning media such us YouTube videos, English songs and children's English movies. Sometimes she asked her son to practice some fun English games:

> *"Though I am not proficient and not fluent in English as I was not good in English when I was at my school but I try to dedicate my best efforts to support my son in learning English. I always accompany him to accomplish English school assignments and help him if he has any difficulties. I provide internet access so that he can search his favorite English songs and movies. Sometimes I ask my son to practice some fun English games that we find from YouTube. I think that my son and me learn English together."* (Parent 3)

Parent 4 provided limited assistance and accompaniment for her daughter's home learning because of her job:

> "*I have limited time to involve in my daughter's home-learning as I have to work outside. I have consulted this impediment to the teacher then my daughter is allowed to do her home learning in the evening session*." (Parent 4)

Based on the data gathered home-based parental involvement can be in the forms of parents constant monitoring, parents' accompaniment and parents' assistances in their children's learning at home activities. Financing an English private course and providing additional English learning media such as videos, online games, English songs and English story books become the other features of parents' support in their children's English learning.

Discussion

The result shows there are three main triggers in parents home-based involvement: the first trigger is parents' belief in the language learning. Parents perceive English, as international language, is important to be learned by their children in order to support them in achieving their successful future careers and gaining knowledge and information through digital technology. This finding supports (Dewi et al., 2017 ; Ivankova, Creswell, & Stick, 2006; Mosty & Lefever, 2013; Reddy & English, 2016; Xiaoyi, 2017) who assert that children's language learning might be mainly indicated by both belief and attitude possessed by parents in the language. The second trigger is the school implementation of technological learning tools which requires more parents' involvement since the children still depend on their parents to deal with these tools in learning.

The finding is in line with Selwyn et al., (2011) and Willis & Exley (2018) who claim that school's learning platforms technologies are considered to increase parental involvement as parents will be enabled to gain information and resources related to their children's education as well as to support and review their children's learning. While the third trigger is parents' expectation of their children academic achievement. They expect that their involvement will enhance their children best attainment in learning. This finding is in correlation with Hosseinpour (2015); Povey et al., (2016); Rahman, (2015) who argue that parental involvement provides motivation and encouragement during the learning processes. The data above reveals barriers that parents encounter in their home-based involvement. The first barrier is the lack of parental time availability. This finding corresponds with Jafarov (2015) who states that parents lack of time can be one of problems in parental involvement. The insufficient time in parental involvement might be related to the family socio-economic situation as parent 3 experiences with. This result is in relation with Poyraz (2017); Jafarov (2015); Larocque et al., (2011) who assert that socio-economic situation can affect parents' involvement in their children language learning. The second problem is parents' unproficiency in English. This finding supports (Poyraz, 2017) who claims that the parents' incompetence in English due to the low level of education can be the factor which leads to their less involvement in their children language learning. While the fourth impediment is parents' unfamiliarity with the use of technological tools. It is in accordance with Goodall, 2017 and Povey et al., 2016 who discover that the inability of parents to access the technological tools can be one of the obstacles and some parents regard learning platform merely just as an additional burden for them.

Based on the data gathered home-based parental involvement are in the forms of parents constant monitoring, parents' accompaniment, parents' assistances, parents-child discussion in

their children's learning at home activities and financing an English private course. This finding is in correlation with Benner et al., (2016); Castillo & Gamez (2013) who state that parents can play critical roles in supporting children to develop their language learning at home. Providing additional English learning media such as videos, online games English songs and English story books become the other features of parents' support in their children's English learning. This result is in correlation with (Idris et al., 2018) who claim that audio-visual media is more attractive for children since they can listen and watch at the same time. Additionally, Brannon et al., (2013) describe that literacy home activity has been examined as a beneficial English language learning.

CONCLUSION

The results display the triggers, barriers and features of parents' home-based involvement. There are three main triggers in the parents' home-based involvement in children's English language learning. The first trigger is parents' belief of the importance of English. While, the second trigger is the school implementation of technological learning tools which requires more parents' involvement. Finally, the third trigger is parents' expectation of their children academic achievement. The finding also reveals the barriers that parents encounter in their home-based involvement. Those are related to parents' lack of time, parents' unproficiency in English and parents' unfamiliarity with the use of technological tools. Finally, it is revealed that the features of home-based parental involvement emerged in the forms of parents' constant monitoring, parents' accompaniment and parents' assistances in their children's learning at home activities. Financing an English private course and providing additional English learning media such as videos, online games, English songs and English story books become the other features of parents' support in their children's English learning. Since this study was conducted by exploring parents' involvement whose children study at school which located in a city. We recommend further research to investigate the involvement of parents whose children study in rural areas.

ACKNOWLEDGMENTS

We would like to express our gratitude to all the participants who have been willing to get involved in this study. We also gratefully appreciate all friends and relatives who have contributed to the completion of this study.

REFERENCES

Benner, A. D., Boyle, A. E., & Sadler, S. (2016). Parental Involvement and Adolescents' Educational Success: The Roles of Prior Achievement and Socioeconomic Status. *Journal of Youth and Adolescence*, *45*(6), 1053–1064. https://doi.org/10.1007/s10964-016-0431-4

Brannon, D., Dauksas, L., Coleman, N., Israelson, L., & Williams, T. (2013). Measuring the Effect That the Partners' Dialogic Reading Program Has on Preschool Children's Expressive Language. *Creative Education*, *04*(09), 14–17. https://doi.org/10.4236/ce.2013.49b004

Butler, Y. G. (2014). Parental factors and early English education as a foreign language: A case study in Mainland China. *Research Papers in Education*, *29*(4), 410–437. https://doi.org/10.1080/02671522.2013.776625

Castillo, R., & Gamez, L. C. C. (2013). Assisting your Child ' s Learning in L2 is like Teaching them to Ride a Bike : A Study on Parental. *Gist Education and Learning Research Journal*, *7*(7), 54–73.

frontiers | Frontiers in Psychology

ORIGINAL RESEARCH
published: 02 June 2022
doi: 10.3389/fpsyg.2022.916338

Parental Home Monitoring and Support and Students' Online Learning and Socioemotional Well-Being During COVID-19 School Suspension in Hong Kong

Cheng Yong Tan[1†], Qianqian Pan[2†], Yuxiao Zhang[3†], Min Lan[4†] and Nancy Law[1†]*

[1] Faculty of Education, The University of Hong Kong, Hong Kong, Hong Kong SAR, China, [2] National Institute of Education, Nanyang Technological University, Singapore, Singapore, [3] Department of Educational Studies, College of Education, Purdue University, West Lafayette, IN, United States, [4] College of Teacher Education, Zhejiang Normal University, Jinhua, China

Contextualized in the prolonged period of COVID-19-related school suspension in Hong Kong, the present study unravels relationships among socioeconomic status (SES), parental involvement, and learning outcomes for a matched sample of 186 primary and 932 secondary school students and their parents who participated in the eCitizen Education 360 survey. Three-step latent profile analysis (LPA) revealed different types of parental involvement at home and in school. For the primary school sample, students' SES did not predict membership in the parental involvement typology, but students whose parents provided more home monitoring and support had the highest level of online self-efficacy. As for the secondary student sample, students whose parents provided more home monitoring and support tended to have access to more home learning resources. Students whose parents provided home monitoring and support had the highest levels of online self-efficacy, acquisition of digital skills, and cognitive-emotional regulation, and were the least worried about school resumption. The study underscores complex patterns of parental involvement and identifies effective parental involvement practices that contribute to students' home online learning during the school suspension.

Keywords: COVID-19, online learning, parental involvement, school closure, self-efficacy, self-regulation, socioeconomic status, socioemotional learning

OPEN ACCESS

Edited by:
África Borges, University of La Laguna, Spain

Reviewed by:
María De Los Dolores Valadez Sierra, University of Guadalajara, Mexico
Elena Rodríguez-Naveiras, University of La Laguna, Spain

***Correspondence:**
Cheng Yong Tan
tancy@hku.hk

†These authors have contributed equally to this work and share first authorship

Specialty section:
This article was submitted to Educational Psychology, a section of the journal Frontiers in Psychology

Received: *09 April 2022*
Accepted: *18 May 2022*
Published: *02 June 2022*

Citation:
Tan CY, Pan Q, Zhang Y, Lan M and Law N (2022) Parental Home Monitoring and Support and Students' Online Learning and Socioemotional Well-Being During COVID-19 School Suspension in Hong Kong. Front. Psychol. 13:916338. doi: 10.3389/fpsyg.2022.916338

INTRODUCTION

Students in many education systems experienced prolonged periods of school suspension during COVID-19. For example, students in Hong Kong switched from face-to-face lessons in school to home-based online learning in January–May/June 2020 as the city implemented various measures to contain the community spread of the virus. The transition in learning modes affected student learning in many ways. First, compared to face-to-face school-based lessons, the effectiveness of home online learning is influenced by the availability of socioeconomic status (SES)-related family resources and parental involvement (Livingstone et al., 2018; Bol, 2020). Second, students need to be self-regulated and self-efficacious to manage their own learning during online sessions (Hwang et al., 2017; Eyimaya and Irmak, 2021). Third, students struggle to cope with the uncertainty of learning modality during and after the school suspension (Spinelli et al., 2020).

Given the different contexts in which students learn during the school suspension period as compared to pre-pandemic times, it is imperative to advance our understanding of how SES, parental involvement, students' socioemotional well-being, and online learning are related in three key areas. First, we need to unravel what parents are doing to support students' learning and well-being, especially in lower-SES families during home-based online learning (Kerr et al., 2021; Low and Mounts, 2021; Radey et al., 2021; Fosco et al., 2022; Ilari et al., 2022). Studies have found that parents encounter different challenges in trying to support student learning during the school suspension (Agaton and Cueto, 2021; Akinrinmade et al., 2021; Alshwiah, 2021; Chen C. Y. C. et al., 2022), so insights gleaned from research in this area will advance our knowledge on social stratification and equity in student learning.

Second, we need to understand how parental involvement contributes to students' learning and socioemotional well-being during the school suspension (Demir and Demir, 2021; Lawrence and Fakuade, 2021; Liu et al., 2021; Yang et al., 2022). The knowledge gleaned from research in this area can inform parental involvement practices in the *New Normal* of education—situations that call for agile switching across blended, fully online (asynchronous or bichronous), or hybrid (combining face-to-face and online synchronous at the same time) learning modes (Martin et al., 2020; Morse et al., 2022), which may be compelled by future episodes of mandatory school suspension or in support of pedagogical innovation initiatives.

Third, the onset of sustained home-based online learning during school suspension underscores the importance of and challenges to ensuring students' socioemotional well-being (Mactavish et al., 2021). Before the pandemic, some schools may have experienced a tension between prioritizing students' academic achievement and enhancing students' socioemotional well-being. However, the school suspension has challenged this bifurcation because students need to have high levels of socioemotional well-being to be adaptive during sustained home-based online learning without face-to-face social support from friends and teachers (Durna and Kosterelioglu, 2021; Allen et al., 2022). The knowledge gleaned from research on students' socioemotional well-being during the school suspension can inform the design of school-based support programs that enhance students' self-efficacy, cognitive-emotional self-regulation, and ability to cope with anxiety (Anderson et al., 2021; Hatzichristou et al., 2021; Lorenzo et al., 2021; Wang et al., 2021).

The present study addresses these three key areas by investigating how a specific aspect of family factors, namely parental involvement, can contribute to primary and secondary students' online learning during the school suspension in Hong Kong.

Parental Involvement

The study builds on the conceptualization of parental involvement as comprising home and school involvement. For example, Epstein (1995) conceptualized parental involvement as creating a conducive home environment for children, communicating with schools, volunteering in school activities, supporting children's home learning, participating in school decision-making, and collaborating with the community. Lareau (2003) examined how parents communicate with their children, negotiate with school authorities for special accommodations to address their children's learning needs, and organize their children's time to develop the latter's potential. These different aspects of parental involvement can be summarized as home and school involvement (Pomerantz et al., 2007). Home involvement includes parent–child discussions, parental monitoring of children's learning, and parents building a positive relationship with their children (McNeal, 1999). School involvement includes parent–teacher discussions on children's learning and parental participation in school activities (Castro et al., 2015).

It is noteworthy that the literature on parental involvement is largely contextualized in pre-COVID-19 times when formal student learning occurs in school settings *via* face-to-face lessons, and parents assume supporting roles to complement what teachers do at school. During the pandemic-induced school suspension, students spend large amounts of time having online lessons at home and parents have to assume a wider range of roles such as being the student's learning supervisor, tutor, and home-schooling teacher (Agaton and Cueto, 2021). Morse et al. (2022) found that Australian caregivers who had home-schooled at least one child during COVID-19 were confronted with challenges such as connecting with the children, managing work-life-school balance, and facilitating home-schooling although they were not trained as teachers. Demir and Demir's (2021) study found that parents of elementary and secondary school students in Turkey had to ensure that their children followed the lessons and motivate their children. In so doing, they became more aware of what their children were learning and appreciated the value of the teachers and the school more. These studies suggest that the distinction between home and school involvement is being blurred and parents may have different patterns of involvement during the pandemic-induced school suspension. However, research has not investigated parental involvement patterns during the school suspension although there are studies unraveling different patterns of parental attitudes toward home learning (Pratama and Firmansyah, 2021). This is the first knowledge gap that the present study will address using latent profile analysis of the patterns of parental home and school involvement before and during the school suspension.

Socioeconomic Status and Parental Involvement

Socioeconomic status measures individuals' hierarchical ranking reflecting their access to or control over valued resources necessary for success (Mueller and Parcel, 1981). Research has shown that SES has an enduring influence on students' physical, cognitive, and socioemotional development (Bradley and Corwyn, 2002). Common SES measures include parents' educational attainment and occupational status, family income and home resources (Sirin, 2005). Among the four indicators, studies have shown that parental education and home resources (especially educational) are more strongly associated with students' learning outcomes (Sirin, 2005).

Parents who are more highly educated may be more involved for many reasons. At a personal level, they have higher levels of personal drive and determination (Crane, 1996). From a cultural perspective, these parents have benefited from the education system, so they are more inclined to be involved in activities that enable their children to also succeed academically (Portes and MacLeod, 1996). At home, they are more likely to provide cognitively stimulating and developmentally appropriate learning experiences for their children, engage their children in intellectually enriching conversations, and possess higher educational aspirations for their children (Reay, 1998; Kellaghan, 2001; Park and Holloway, 2013; Hartas, 2015). They are also more equipped to advise their children on school matters and help with their children's homework. As for the SES indicator of home resources, parents with more of these resources are able to use these resources to support their children's learning (Stevenson and Stigler, 1992). Therefore, parents with more home resources are more likely to have higher levels of involvement.

In the domain of school involvement, higher-SES parents may be more confident in engaging with their children's teachers and they are more proactive in soliciting school resources to support their children's learning (Reay, 1998). In contrast, lower SES parents may be less involved in their children's education because of barriers they have to surmount (Hornby and Lafaele, 2011; Wang et al., 2016; Malone, 2017). These barriers include time and resource constraints, poor knowledge of their children's homework, and communication issues with their children (Wang et al., 2016).

Research on the association between SES and parental involvement during the pandemic-induced school suspension where students have to learn at home is tentative and results are mixed at best, thereby pointing to the second knowledge gap. For example, Agaton and Cueto (2021) found that parents from marginalized families living in rural areas in the Philippines were confronted with various challenges that impeded involvement as the learning supervisor, tutor, and home-schooling teacher in their children's home-based learning during the pandemic. These challenges included financial difficulties during the lockdown and difficulty in accessing and using technology for online learning. Relatedly, Radey et al. (2021) reported that low-income, single mothers in the United States selected home-based care and schooling during the pandemic because of safety or financial constraints. In another study, Chen C. Y. C. et al. (2022) reported that parents from different SES backgrounds in the United States had different concerns that affected their parental involvement. Parents of low- and lower-middle-SES backgrounds encountered more financial and material hardship during the pandemic. In contrast, parents with higher income were stressed over how to structure their home learning environments and plan home educational and physical activities for their children. In a study examining parental-child relationships and interactions, Ilari et al. (2022) did not find differences in different aspects of parenting among parents with different levels of education in the United States during the lockdown. These parenting aspects were related to positive parenting (using praise and compliments for children), use of discipline in parenting, positive relationships (parental modeling and promoting positive interactions with children), positive parental emotional states, parenting self-efficacy, and routine management of children's daily activities. The present study will address this second knowledge gap by investigating the pattern of parental involvement for parents varying in their education and home resources, as SES indicators, in the latent profile analysis.

Parental Involvement and Students' Socioemotional Well-Being

As teaching and learning is conducted online during the pandemic-induced school suspension, it is important to understand students' online learning outcomes and socioemotional well-being. However, studies have tended to examine students' socioemotional well-being rather than students' online learning outcomes. Research shows that students' socioemotional well-being is often adversely affected during the pandemic-induced school suspension when lessons are conducted online. For example, Chen Y. et al.'s (2022) longitudinal study found that adolescents in Sweden had higher levels of stress and psychosomatic symptoms and lower levels of happiness following the onset of the pandemic. Mactavish et al. (2021) found that students in Ontario reported worse well-being (e.g., worries, happiness) and psychological distress during the pandemic when compared to pre-pandemic times. Durna and Kostereliogl u (2021) reported that teachers in Turkey perceived that students' socioemotional well-being was adversely affected during the pandemic. Kamaşak et al. (2022) found that students in Turkey were more introverted, irritable, and pessimistic during the pandemic.

There is empirical evidence that parental involvement influences students' socioemotional well-being during the pandemic-induced school suspension when teaching and learning is conducted online. Allen et al.'s (2022) study of secondary school students in Australia found that when parents focused on identifying and cultivating their children's positive attributes, students became more adaptive and resilient during the pandemic. Furthermore, students' positive reappraisal and emotional processing was significantly associated with their stress-related growth, and these psychological factors mediated the effects of strength-based parenting on their growth. Spinelli et al.'s (2021) Italian study showed that more "chaotic" households had higher levels of parenting stress, parents who were more stressed were less involved in their children's learning, and students whose parents were less involved were less able to regulate their own emotions. Mactavish et al. (2021) reported that student-perceived social support from family and friends was related to less severe post-traumatic stress symptoms and it attenuated the increase in psychological distress in Ontario. Wang et al. (2021) found that adolescents who received more parental social support had higher levels of positive affect and lower levels of negative affect in the United States. Liu et al. (2021) reported that higher levels of parental academic involvement and lower levels of parent–child communication was associated with higher levels of middle school student depression during the pandemic in China. Yang et al.'s (2022) study showed that middle school students in China had higher levels of affective

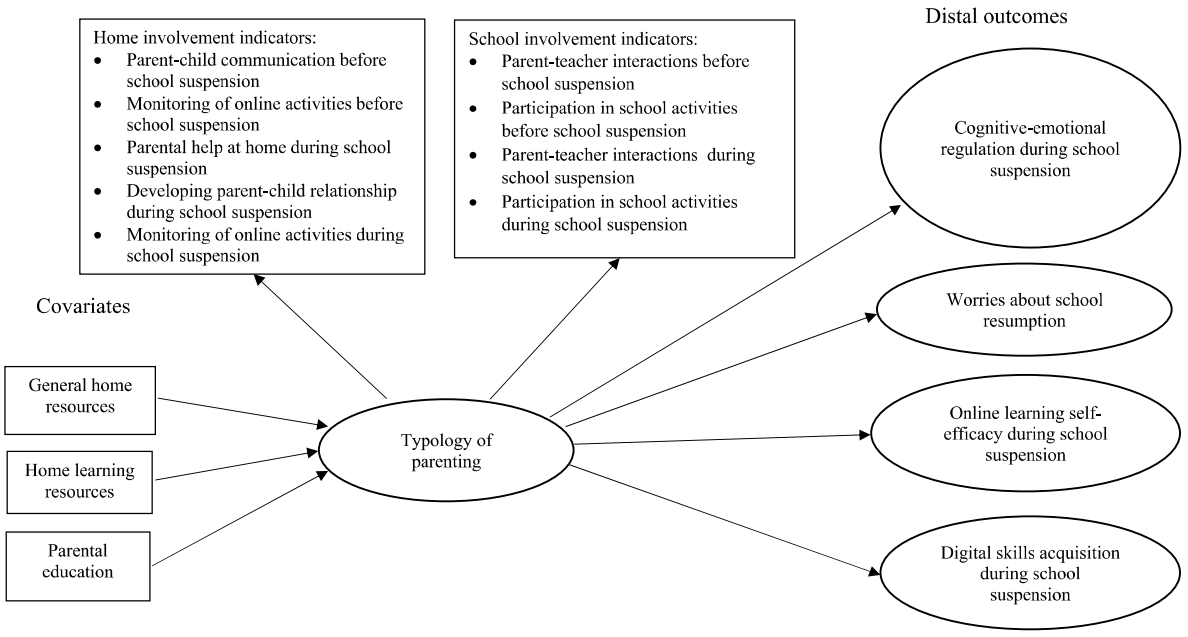
Distal outcomes
Home involvement indicators:
Parent-child communication before school suspension
Monitoring of online activities before school suspension
Parental help at home during school suspension
Developing parent-child relationship during school suspension
Monitoring of online activities during school suspension
School involvement indicators:
Parent-teacher interactions before school suspension
Participation in school activities before school suspension
Parent-teacher interactions during school suspension
Participation in school activities during school suspension
Cognitive-emotional regulation during school suspension
Covariates
Worries about school resumption
General home resources
Home learning resources
Parental education
Typology of parenting
Online learning self-efficacy during school suspension
Digital skills acquisition during school suspension

FIGURE 1 | Conceptual framework.

engagement in their learning if they had involved parents and supportive teachers.

The present study examines how parental involvement is related to students' cognitive-emotional regulation strategies during the school suspension and their worries about school resumption. Cognitive-emotional regulation strategies include students learning to cope with emotional experiences arousing from negative events, such as their perceived worries for future study and life. Medrano et al. (2016) showed that cognitive-emotional regulation can moderate the effects induced by emotional states on adolescents' academic self-efficacy. A healthy parent–child relationship and parental monitoring are both associated with students' cognitive-emotional regulation strategies (Chen and Chng, 2016; Hapunda et al., 2019). However, it is unclear how students' cognitive-emotional regulation behaviors can be influenced or protected by parental involvement (Moilanen et al., 2018), particularly with parents and children spending more time together during the pandemic lockdowns.

Parental Involvement and Students' Online Learning

Some researchers have investigated how parental involvement influences students' online learning outcomes. With the rapid development of online learning, some may perceive a lesser need for parental guidance and intervention. However, research shows that online learning may require parents to play an instructional role in their children's learning (Borup et al., 2013). For instance, a study in Hong Kong found that some children were unable to complete learning tasks independently during the school suspension due to a lack of learning interests and home environment-related limitations (Lau and Lee, 2021). Furthermore, students may pervasively use electronic devices (e.g., for browsing social media) without parental mediation during the school suspension (Lau and Lee, 2021), thereby resulting in lower levels of online learning. Therefore, it is unsurprising when Lawrence and Fakuade (2021) reported from their study that, compared to the adolescents' learning participation, parental involvement contributed more to the online learning commitment of adolescent learners in Nigeria during the school suspension.

The present study examines two students' online learning outcomes during the school suspension, namely students' online learning self-efficacy and acquisition of digital skills. Online learning self-efficacy refers to students' beliefs in their capacity for online learning. It is positively related to students' learning outcomes, including satisfaction of online learning, the intention of continuing online learning, and knowledge acquisition (Bates and Khasawneh, 2007; Hodges, 2008; Shen et al., 2013; Alqurashi, 2016). In light of the implementation of home-based online learning due to the pandemic-induced school suspension, students' learning has become more dependent on their families (Gupta and Jawanda, 2020; Middleton, 2020). Indeed, some studies show that parents' engagement and high expectations positively impact students' online learning self-efficacy (Vekiri and Chronaki, 2008; Hsiao et al., 2012). However, these studies were conducted before COVID-19 when parents had the discretion to decide whether to enroll their children in online learning programs and they can adequately prepare themselves to support their children's online learning (Beck et al., 2014; Curtis and Werth, 2015). In the case of mandatory online learning during the pandemic-induced school suspension, many parents are ill-prepared to assume new responsibilities such as helping their children to stay focused and navigate online learning platforms (ElSaheli-Elhage, 2021;

Weaver and Swank, 2021). Therefore, research needs to examine the relationship between parental involvement and students' online learning outcomes in these different circumstances.

In summary, the present study will address the (third) research gap pertaining to the influence of parental involvement on students' socioemotional well-being and online learning outcomes. The students' socioemotional well-being variables comprise their cognitive-emotional regulation during the school suspension and worries for school resumption while the online learning outcomes comprise students' online learning self-efficacy and acquisition of digital skills.

Present Study

The overall aim of the present study is to examine relationships among SES, parental involvement, and student outcomes during the first wave of school suspension in Hong Kong in 2020. The specific aims are to (a) identify a typology of parental involvement based on variations in their home and school involvement; (b) clarify how SES is associated with different patterns of parental involvement; and (c) compare levels of student outcomes associated with the different patterns of parental involvement using matched data from students and their parents collected in Hong Kong (conceptual framework in **Figure 1**).

Hong Kong is an interesting context for the present study for two reasons. First, Hong Kong is characterized by high levels of social inequality (Kwan and Wong, 2016), so it is important to ascertain whether there are differences in the pattern of parental involvement among parents of different SES during the pandemic. Second, students in Hong Kong have experienced multiple waves of school suspension since early 2020 as the city implements various measures to contain the community spread of the virus, so it is important to understand what aspects of parental involvement can enhance students' online learning and mitigate the adverse effects of changing to this learning modality.

The students were sampled from primary and secondary schools. Thus, this study is able to compare the relationships among SES, parental involvement, and students' outcomes for these two groups of students. This comparison between primary and secondary students is important because students' developmental needs evolve as they grow up; curricular expectations and educational aims differ with grade levels; and parents may adapt their involvement to address the different learning needs of their children (Hill and Tyson, 2009; Castro et al., 2015; Tan et al., 2019).

MATERIALS AND METHODS

Sample

Matched parent[1]–child data from primary and secondary schools were analyzed in this study. The sample comprised primary school students and secondary school students as well as their parents who participated in the eCitizen Education 360 survey designed to collect data on students' learning experiences during school suspension due to COVID-19 in Hong Kong. The primary school sample comprised 186 Primary 3–6 students from 13 primary schools (38.17% from Primary 3–4; 61.83% from Primary 5–6) and their parents. The gender distribution of the primary students was 48.39% boys and 51.61% girls. The primary school students had a mean age of 10.80 years (SD = 1.04; range = [8, 14]). The parents' educational attainment differed widely (17.20% junior secondary or below; 48.39% senior secondary/diploma; 11.29% associate degree/higher diploma; 19.90% Bachelor's degree; 6.98% Master's degree or above). The majority of these parents were aged 36–45 years (64.52%) with the rest aged 19–25 years (0.54%), 26–35 years (9.14%), 46–55 years (23.66%), and 56 years and above (2.15%). The secondary school sample comprised 932 students (66.31% from Secondary 1–3; 33.59% from Secondary 4–6; 33.59%) from 23 secondary schools and their parents. There were more girls (71.46%) than boys (28.43%) in the secondary student sample (0.11% missing data). The secondary school students had a mean age of 14.97 years (SD = 1.58; range = [11, 19]). The parents' educational attainment of the secondary students was also diverse (21.89% junior secondary or below; 33.91% senior secondary/diploma; 10.09% associate degree/higher diploma; 21.35% Bachelor's degree; 12.34% Master's degree or above; 0.43% missing data). The majority of these parents were aged 46–55 years (52.90%) with the rest aged 19–25 years (0.75%), 26–35 years (1.39%), 36–45 years (37.45%), and 56 years and above (7.08%); missing values (0.43%).

Measures

Three indicators were used to measure SES (adapted from OECD, 2017). The first indicator was computed using student data on whether they had three types of general home resources (desk for study, own room, quiet place to study; *Yes* or *No*). The second indicator measuring the availability of home learning resources was computed using two-parameter logistic model and the graded response model in item response theory for student data on (a) the number of books at home [five-point response scale from *None or very few (0–10 books)* to *Enough to fill three or more bookcases (more than 200 books)*]; and (b) whether they had access to five types of digital learning resources at home (desktop computer, laptop/portable computer, tablet, smartphone, Internet; *Yes* or *No*). The third indicator, parental education, was obtained from parental data on their educational attainment (five-point response scale; *Junior secondary or below* to *Master's degree or above*).

Parental involvement was measured using parents' responses to nine questions (adapted from OECD, 2017). Four questions asked about the frequency to which parents were involved in different home involvement practices (four-point scale; from *Never* to *Always*):

- Parent–child communication before the school suspension (three items; e.g., "I discussed with my child what he/she has learnt in school"); and
- Parental monitoring of children's online activities during the school suspension (three items; e.g., "I controlled my

[1]Respondents to the parent survey could be parents or guardians. A large majority of the responses came from parents (98.92% in primary school sample and 96.57% in secondary school sample).

child's screen time when he/she was using digital devices"); and
- Parental help with homework during the school suspension (three items; e.g., "I helped my child with his/her online homework");

Parents also responded to another question (four items) on their perceptions of how the pandemic affected the parent–child relationship (e.g., "I have understood my child's ability more") using a five-point scale (*Strongly disagree* to *Strongly agree*); items.

Four other questions asked about the frequency with which parents were involved in different school involvement activities (four-point scale; from *Never* to *Always*):

- Parent–teacher interactions before the school suspension (four items; e.g., "I discussed my child's schoolwork/grades/scores with a teacher on my own initiative");
- Parental participation in school activities before the school suspension (three items; e.g., "I attended a scheduled teacher-parent meeting");
- Parent–teacher interactions during the school suspension (four items; e.g., "I discussed my child's schoolwork/grades/scores with a teacher on my own initiative"); and
- Parental participation in school activities during the school suspension (four items; e.g., "I participated virtually in activities related to parenting organized by the school").

Separate confirmatory factor analysis (CFA), conducted in the programming environment R using *lavaan* (Rosseel, 2012), for primary and secondary student samples showed that all items significantly loaded on their intended parenting variables, $p < 0.01$ (**Tables 1**, **2**). The CFA model fit (CFI = 1.00, $0.00 \leq \text{RMSEA} \leq 0.01$) and scale reliabilities ($0.71 \leq \Omega \leq 0.95$) were satisfactory. Factor scores of the nine parenting variables were used in the analysis.

Student outcomes were measured using student responses to four questions on their:

- Cognitive-emotional regulation during the school suspension (three items adapted from Garnefski and Kraaij's (2007) *Cognitive Emotion Regulation Questionnaire*; e.g., "I thought about how I could best cope with the situation") using a five-point scale (*Never* to *Always*);
- Worries about school resumption (six items developed by the project team; e.g., "I cannot catch up with my schoolwork") using a five-point scale (*Strongly disagree* to *Strongly agree*);
- Online learning self-efficacy during the school suspension (six items adapted from Muris' (2001, 2002) academic self-efficacy subscale; e.g., "I could finish my homework on time") using a five-point scale (*Strongly disagree* to *Strongly agree*); and
- Acquisition of digital skills during the school suspension (three items developed by the project team; e.g., "Learned new digital skills useful for my academic studies") using a four-point scale (*Not at all* to *To a large extent*).

Confirmatory factor analysis shows that all items significantly loaded on the intended student outcome variables, $p < 0.01$ (**Tables 3**, **4**). The CFA model fit was satisfactory ($0.97 \leq \text{CFI} \leq 1.00$; $0.00 \leq \text{RMSEA} \leq 0.07$). Scale reliabilities ($\Omega$) were 0.56, 0.74, 0.75, and 0.84 for students' cognitive-emotional regulation, worries about school resumption, online learning self-efficacy, and acquisition of digital skills, respectively. Scale reliabilities were satisfactory for the secondary student sample ($0.71 \leq \Omega \leq 0.82$). Factor scores of these student outcome variables were used in the analysis.

Procedure

The eCitizen Education 360 survey was administered during June–July 2020 when schools resumed briefly after 4 months of suspension. Survey data were collected from school leaders, teachers, students, parents, and the e-learning coordinator from each participating school. All schools in Hong Kong were invited to participate in the survey on a voluntary basis. The schools that came on board made decisions, based on their needs and administrative resources, on the specific grade levels and numbers of classes to participate in the survey. Parents of the participating students were invited to complete the parent survey. For the purposes of this study, only matched parent–child data from primary and secondary schools were analyzed. Various aspects of the study, including project details (e.g., study objectives, elements of research methodology that involved human participants) and data-collection (e.g., data sources, recruitment of study participants, risk assessment, informed consent, data-retention) were reviewed and approved by the research team's university Human Research Ethics Committee.

Analytical Strategy

The present study employed the three-step LPA (Vermunt, 2010; Asparouhov and Muthén, 2013; Oberski, 2016), using MPlus, to unravel the relationships among family SES, parental involvement, and student outcomes (**Figure 1**). In the first step, we fitted a measurement model using the nine parenting indicators. In the second step, we ascertained the measurement errors associated with the latent profiles. In the third step, we used the SES indicators as predictors of latent profile membership and compared levels of the student outcomes among the profiles.

RESULTS

In the sections that follow, LPA results for the matched parent–child sample for primary schools are presented before those for the secondary schools in this section.

Primary Student Sample

Different model indicators were used to determine the number of latent profiles (Nylund et al., 2007). First, for the matched parent–child primary school sample, the analysis (**Table 5**) shows that the information criteria improved when the number of profiles was increased from one to five. However, the likelihood ratio tests indicated that the four-profile solution did not differ significantly from the three-profile solution. The entropy was high for all the

TABLE 1 | CFA for parenting variables (primary schools).

Variables	Items	Factor loadings (SE)	CFI	RMSEA	Reliability (Ω)
Parent–child communication before school suspension	par_Q16_11	0.74** (0.08)	1.00	0.00	0.92
	par_Q16_12	0.98** (0.02)			
	par_Q16_13	0.94** (0.02)			
Parental monitoring of children's online activities before school suspension	par_Q16_8	0.78** (0.06)	1.00	0.00	0.91
	par_Q16_9	1.00** (0.02)			
	par_Q16_10	0.82** (0.04)			
Parental monitoring of children's online activities during school suspension	par_Q7_7	0.71** (0.06)	1.00	0.00	0.87
	par_Q7_8	1.00** (0.03)			
	par_Q7_9	0.76** (0.05)			
Parental help with homework during school suspension	par_Q7_1	0.64** (0.08)	1.00	0.00	0.71
	par_Q7_2	0.52** (0.09)			
	par_Q7_3	0.84** (0.07)			
Parent–child relationship during school suspension	par_Q11_1	0.81** (0.07)	1.00	0.01	0.81
	par_Q11_2	0.71** (0.09)			
	par_Q11_3	0.70** (0.08)			
	par_Q11_4	0.54** (0.08)			
Parent–teacher interactions before school suspension	par_Q17_1	0.95** (0.02)	1.00	0.00	0.95
	par_Q17_2	0.82** (0.04)			
	par_Q17_3	0.96** (0.01)			
	par_Q17_4	0.82** (0.04)			
Parental participation in school activities before school suspension	par_Q17_5	0.78** (0.10)	1.00	0.00	0.82
	par_Q17_6	0.84** (0.06)			
	par_Q17_7	0.68** (0.07)			
	par_Q17_9	0.74** (0.06)			
Parent–teacher interactions during school suspension	par_Q8_1	0.81** (0.05)	1.00	0.00	0.87
	par_Q8_2	0.54** (0.08)			
	par_Q8_3	0.89** (0.08)			
	par_Q8_4	0.70** (0.06)			
Parental participation in school activities during school suspension	par_Q8_5	0.61** (0.10)	1.00	0.00	0.81
	par_Q8_6	0.84** (0.10)			
	par_Q8_8	0.67** (0.10)			
	par_Q8_10	0.70** (0.09)			

$^{**}p < 0.01$.

profiles (0.74–0.85). The percentage of parents in profiles 1 to 3 in the three-profile solution ranged from 27.96 to 43.01% whereas the percentage for profile 4 in the four-profile solution was only 2.69%. Therefore, a three-profile solution (27.96%, 43.01%, and 29.03% of parents in profiles 1–3, respectively) was used to characterize the parents in the primary student sample.

Profile 1 parents were named *Low-engagement* parents because they had the lowest mean levels for most of the home involvement variables (except parent–child relationship during school suspension) and school involvement variables during the school suspension (**Table 6**). In contrast, profile 2 parents had the highest mean levels for most of the home involvement variables (except parental monitoring) and all of the school involvement variables, so they were named *Comprehensive-Support* parents. Profile 3 parents were named *Home-Monitoring-and-Support* parents to reflect their higher levels of monitoring of children's online activities and relatively high levels of parent–child communication and parental help with children's homework and lowest levels for most of the school involvement variables.

The three SES indicators (general and home learning resources, parental education) were used to predict parents' membership in the typology. Results (**Table 7**) show that none of the SES indicators predicted parents' membership in the typology at the 0.05 level (with *Comprehensive-Support* parents (profile 2) used as the reference group for comparison). **Table 8** presents the levels of student outcomes associated with the four profiles. Pairwise comparisons of profile means of student outcomes (**Table 9**), conditional on average SES levels, show that students with profile 2 parents had the lowest whereas students with profile 3 parents had the highest mean level of online learning self-efficacy during the school suspension. There were no other significant differences in mean levels of the other three student outcomes (acquisition of digital skills, cognitive-emotional regulation, worries about school resumption) among students associated with the different profiles at the 0.05 level.

Secondary Student Sample

Next, results for the matched parent–child secondary school sample are presented. The analysis (**Table 10**) shows that the information criteria improved when the number of profiles was increased from one to six. However, the likelihood ratio tests indicated that the five-profile solution did not differ significantly

TABLE 2 | CFA for parenting variables (secondary schools).

Variables	Items	Factor loadings (SE)	CFI	RMSEA	Reliability (Ω)
Parent–child communication before school suspension	par_Q16_11	0.85** (0.02)	1.00	0.00	0.93
	par_Q16_12	0.95** (0.01)			
	par_Q16_13	0.91** (0.02)			
Parental monitoring of children's online activities before school suspension	par_Q16_8	0.76** (0.02)	1.00	0.00	0.90
	par_Q16_9	0.98** (0.01)			
	par_Q16_10	0.85** (0.02)			
Parental monitoring of children's online activities during school suspension	par_Q7_7	0.72** (0.02)	1.00	0.00	0.72
	par_Q7_8	0.96** (0.01)			
	par_Q7_9	0.86** (0.02)			
Parental help with homework during school suspension	par_Q7_1	0.67** (0.03)	1.00	0.00	0.89
	par_Q7_2	0.51** (0.04)			
	par_Q7_3	0.83** (0.04)			
Parent–child relationship during school suspension	par_Q11_1	0.81**(0.02)	1.00	0.01	0.84
	par_Q11_2	0.77** (0.03)			
	par_Q11_3	0.78** (0.02)			
	par_Q11_4	0.76** (0.03)			
Parent–teacher interactions before school suspension	par_Q17_1	0.91** (0.01)	1.00	0.00	0.88
	par_Q17_2	0.84** (0.02)			
	par_Q17_3	0.94** (0.01)			
	par_Q17_4	0.79** (0.03)			
Parental participation in school activities before school suspension	par_Q17_5	0.74** (0.04)	1.00	0.00	0.87
	par_Q17_6	0.91** (0.02)			
	par_Q17_7	0.8** (0.02)			
	par_Q17_9	0.75** (0.03)			
Parent–teacher interactions during school suspension	par_Q8_1	0.87** (0.02)	1.00	0.00	0.89
	par_Q8_2	0.78** (0.02)			
	par_Q8_3	0.97** (0.01)			
	par_Q8_4	0.82** (0.02)			
Parental participation in school activities during school suspension	par_Q8_5	0.66** (0.04)	1.00	0.00	0.85
	par_Q8_6	0.79** (0.05)			
	par_Q8_8	0.79** (0.04)			
	par_Q8_10	0.86** (0.03)			

$^{**}p < 0.01$.

from the four-profile solution. The entropy was high for all the profiles (0.82–0.87). The percentage of parents in profiles 1 to 4 in the four-profile solution ranged from 11.27 to 36.05% whereas the percentage for profile 5 in the five-profile solution was only 2.25% (21 parents). Therefore, a four-profile solution (36.05%, 28.54%, 24.14%, and 11.27% of parents in profiles 1–4, respectively) was used to characterize the parents in the secondary student sample.

Profile 1 parents were named *Low-engagement* parents because they had the lowest mean levels of home and school involvement variables among the four profiles (**Table 11**). In contrast, profile 4 parents had the highest mean levels of parental home and school involvement variables, so they were named *Comprehensive Support* parents. Profile 2 parents were named *Balanced-Home-and-School-Support* parents because they were, on balance, involved both in school and at home. Profile 3 parents were named *Home-Monitoring-and-Support* parents to reflect their higher levels of home monitoring and support when compared to profile 2 parents.

The three SES indicators were used to predict parents' membership in the typology. Results (**Table 12**) showed that, when compared to profile 4 (*Comprehensive-Support* parents), parents with more home learning resources were 1.89 times more likely to belong to profile 3, $p < 0.05$. General home resources and parental education did not predict membership in the typology at the 0.05 level. **Table 13** presents the levels of student outcomes associated with the four profiles. Pairwise comparisons of profile means of student outcomes (**Table 14**), conditional on average SES levels, show that students with profile 2 parents had the lowest mean levels for cognitive-emotional regulation, online learning self-efficacy, and acquisition of digital skills, and the highest mean level of worries about school resumption. Students with profiles 3 and 4 parents had the highest mean levels for cognitive-emotional regulation, online learning self-efficacy, and acquisition of digital skills. Additionally, students with profile 3 parents had the lowest mean level of worries about school resumption.

TABLE 3 | CFA for student outcome variables (primary schools).

Variables	Items	Factor loadings (SE)	CFI	RMSEA	Reliability (Ω)
Cognitive-emotional regulation during the school suspension	Q8_1	0.66** (0.06)	1.00	0.00	0.56
	Q8_2	0.26** (0.04)			
	Q8_3	0.68** (0.07)			
Worries about school resumption	Q1a_1	0.55** (0.03)	0.99	0.03	0.74
	Q1a_3	0.70** (0.03)			
	Q1a_5	0.69** (0.03)			
	Q1a_6	0.46** (0.03)			
	Q1b_1	0.58** (0.03)			
Online learning self-efficacy during the school suspension	Q7_1	0.60** (0.03)	1.00	0.04	0.75
	Q7_2	0.79** (0.02)			
	Q7_3	0.75** (0.03)			
	Q7_4	0.48** (0.03)			
Acquisition of digital skills during the school suspension	Q6_1	0.73** (0.02)	1.00	0.00	0.84
	Q6_2	0.74** (0.02)			
	Q6_3	0.91** (0.02)			

$^{**}p < 0.01$.

TABLE 4 | CFA for student outcome variables (secondary schools).

Variables	Items	Factor loadings (SE)	CFI	RMSEA	Reliability (Ω)
Cognitive-emotional regulation during the school suspension	Q9_1	0.45** (0.05)	1.00	0.00	0.71
	Q9_2	0.69** (0.05)			
	Q9_3	0.85** (0.04)			
Worries about school resumption	Q1_1	0.65** (0.03)	0.97	0.06	0.73
	Q1_3	0.75** (0.03)			
	Q1_5	0.62** (0.03)			
	Q1_6	0.49** (0.03)			
	Q1_7	0.51** (0.03)			
	Q1_10	0.50** (0.04)			
Online learning self-efficacy during the school suspension	Q8_1	0.55** (0.03)	0.98	0.07	0.82
	Q8_2	0.74** (0.03)			
	Q8_3	0.52** (0.03)			
	Q8_4	0.81** (0.02)			
	Q8_5	0.79** (0.02)			
	Q8_7	0.57** (0.03)			
Acquisition of digital skills during the school suspension	Q7_1	0.80** (0.02)	0.99	0.04	0.77
	Q7_2	0.62** (0.03)			
	Q7_3	0.88** (0.02)			

$^{**}p < 0.01$.

TABLE 5 | LPA model fit indicators (primary schools).

	Information criteria			% change			*p* for likelihood ratio tests			Entropy
No. of latent profiles	AIC	BIC	*n*-Adjusted BIC	AIC	BIC	*n*-Adjusted BIC	LMR	Adjusted LMR	Bootstrap	
1	3863.45	3921.52	3864.50	–	–	–	–	–	–	–
2	3698.82	3789.14	3700.46	4.26	3.38	4.24	0.01	0.01	0.00	0.74
3	3595.08	3717.66	3597.30	2.80	1.89	2.79	0.04	0.04	0.00	0.80
4	3542.27	3697.10	3545.07	1.47	0.55	1.45	0.40	0.41	0.00	0.85
5	3501.37	3688.46	3504.76	1.15	0.23	1.14	0.25	0.25	0.00	0.85

TABLE 6 | Descriptives for parenting variables (primary schools).

	M(SE) in latent profiles		
	1. *Low-engagement* parents (*n* = 52; 27.96%)	**2. *Comprehensive-Support* parents (*n* = 80; 43.01%)**	**3. *Home-Monitoring-and-Support* parents (*n* = 54; 29.03%)**
Home involvement			
Parent–child communication before school suspension	3.04** (0.17)	3.77** (0.07)	3.69** (0.11)
Parental monitoring of children's online activities before school suspension	2.61** (0.19)	3.84** (0.08)	4.06** (0.20)
Parental monitoring of children's online activities during school suspension	2.58** (0.17)	3.82** (0.09)	3.84** (0.20)
Parental help with homework during school suspension	2.65** (0.14)	3.38** (0.09)	3.03** (0.12)
Parent–child relationship during school suspension	3.39** (0.09)	3.55** (0.08)	3.27** (0.11)
School involvement	2.29** (0.09)	3.02** (0.09)	1.90** (0.10)
Parent–teacher interactions before school suspension	1.80** (0.12)	2.65** (0.11)	1.71** (0.11)
Parental participation in school activities before school suspension	2.38** (0.11)	3.07** (0.08)	1.88** (0.13)
Parent–teacher interactions during school suspension	1.33** (0.06)	1.99** (0.09)	1.33** (0.07)
Parental participation in school activities during school suspension	3.04** (0.17)	3.77** (0.07)	3.69** (0.11)

*$^{**}p < 0.01$.

DISCUSSION

Results from the present study are discussed in this section. Specifically, the discussion will focus on three aspects, namely nuanced patterns of parental involvement for both the matched parent–child primary and secondary school samples, parental monitoring and support in homes with more learning resources, and plausible benefits of parental home monitoring and support for students' socioemotional well-being and online learning during the school suspension in Hong Kong.

First, the present study finds that there were typologies of parental involvement during the pandemic-induced school suspension when teaching and learning was taken online in Hong Kong. The typologies comprised three categories of parents for the matched parent–child primary school sample (*Low-engagement*, *Comprehensive-Support*, *Home-Monitoring-and-Support*) and four categories of parents for the matched parent–child secondary school sample (*Low-engagement*, *Balanced-Home-and-School Support*, *Home-Monitoring-and-Support*, *Comprehensive-Support*). The typologies indicate that parents are not necessarily highly involved or totally uninvolved in their children's learning. Instead, they can have different combinations of home and school involvement practices, possibly to address their children's learning needs. These results add to an emerging body of studies illustrating the value of using latent class/profile analysis to unravel the complexity in parenting during the pandemic. For example, Pratama and Firmansyah's (2021) identified a typology of parents varying in their attitudes toward students' home learning (*Disengaged*, *Positive*, *Negative*) in Indonesia. Martin-Storey et al. (2021) found that there were four latent profiles of Canadian adolescents varying in their perceptions of change in family relationship quality (*Low Change*, *Improvement Only*, *Moderate Instability*, *High Instability*).

Second, the present study shows that, among the three SES indicators examined, only the indicator "home learning resources" was positively associated with membership in the parenting typology for the secondary student sample. Specifically, parents whose secondary school children reported having more learning (not general) resources were more likely to be monitoring and supporting their children's online learning. In contrast, non-learning-related SES indicators (e.g., general home resources, parental education) were not predictive of membership in the typology for both primary and secondary student samples. Home general resources may be indicative of the economic aspects of family SES whereas home learning resources reflect parents' priority given to learning resources. The former is less amenable to school interventions whereas schools can provide parental education programs aimed at supporting families' effective use of home educational resources for student learning.

The results suggest that parents who are involved at home may procure more learning resources to address their older children's learning needs. The availability of home learning resources also enables parents to plan and structure effective learning activities for their children (Chen C. Y. C. et al., 2022). More fundamentally, the availability of home learning resources may indicate that parents have more positive attitudes toward students' home-based online learning (Pratama and Firmansyah, 2021), and therefore, these parents may have higher levels of monitoring of and support for their children's online learning.

Another set of results from the present study shows that, compared to peers associated with other parental latent profiles, primary school students of *Home-Monitoring-and-Support* parents had the highest levels of online learning self-efficacy during the school suspension. These results suggest that parental monitoring and support serves a protective function for students' online learning during the pandemic. This finding adds to the nuanced findings in the literature on associations between parental monitoring and student learning (Patall et al., 2008; Hill and Tyson, 2009). For example, Patall et al. (2008) found that parental homework help was positively associated with the achievement of elementary and high school students

TABLE 7 | SES and latent profile membership (primary schools).

	Logits	Odds ratio
Latent profile 1 (*Low-engagement* parents)		
General home resources	−0.51 (0.32)	0.60
Home learning resources	0.10 (0.33)	1.10
Parental education	−0.03 (0.21)	0.97
Latent profile 3 (*Home-Monitoring-and-Support* parents)		
General home resources	0.35 (0.32)	1.42
Home learning resources	0.50 (0.40)	1.66
Parental education	0.30 (0.19)	1.34

Reference category is latent profile 2 (Comprehensive-Support parents).

TABLE 8 | Descriptives for of student outcomes (primary schools).

	Latent Profiles		
	1 *Low-engagement* parents	2 *Comprehensive-Support* parents	3 *Home-Monitoring-and-Support* parents
		M(SD)	
Cognitive-emotional regulation during the school suspension	−0.14 (0.60)	0.05 (0.75)	0.00 (0.82)
Worries about school resumption	0.09 (0.71)	−0.10 (0.80)	−0.22 (0.66)
Online learning self-efficacy during the school suspension	0.04 (0.68)	−0.07 (0.66)	0.26 (0.52)
Acquisition of digital skills during the school suspension	−0.08 (0.7)	−0.08 (0.69)	0.07 (0.75)

Means indicated are factor scores of student outcomes.

TABLE 9 | Comparison of student outcomes (primary schools).

	Mean difference (SE)
Cognitive-emotional regulation during the school suspension	
Profile 1 – Profile 2	−0.19 (0.13)
Profile 1 – Profile 3	−0.13 (0.14)
Profile 2 – Profile 3	0.04 (0.13)
Worries about school resumption	
Profile 1 – Profile 2	0.19 (0.13)
Profile 1 – Profile 3	0.31 (0.15)
Profile 2 – Profile 3	0.12 (0.13)
Online learning self-efficacy during the school suspension	
Profile 1 – Profile 2	0.12 (0.11)
Profile 1 – Profile 3	−0.21 (0.12)
Profile 2 – Profile 3	−0.33** (0.11)
Acquisition of digital skills during the school suspension	
Profile 1 – Profile 2	0.00 (0.13)
Profile 1 – Profile 3	−0.15 (0.14)
Profile 2 – Profile 3	−0.15 (0.13)

Conditional means (with SES covariates as controls) used in computing differences between latent profiles.
$^{**}p < 0.01$.

but not for middle school students' achievement. They also reported that parental homework help was positively associated with students' verbal achievement but negatively associated with students' mathematics achievement.

Parental monitoring and support is particularly important for primary school students' online learning during the pandemic-induced school suspension. This is because these younger students may have difficulties completing distance learning tasks at home due to lack of learning interests and limitations of home learning environments (Lau and Lee, 2021). Consequently, parents can play an important role by being teachers, autonomy-supportive coaches, and interveners (Knopik et al., 2021). Spear et al. (2021) provided additional insights from teachers' perspectives on what parents need to do to monitor and support

TABLE 10 | LPA model fit indicators (secondary schools).

No. of latent profiles	Information criteria			% change			*p* for likelihood ratio tests			Entropy
	AIC	BIC	*n*-adjusted BIC	AIC	BIC	*n*-adjusted BIC	LMR	Adjusted LMR	Bootstrap	
1.	20533.42	20620.49	20563.33	–	–	–	–	–	–	–
2.	18936.34	19071.78	18982.86	7.78%	7.51%	7.69%	0	0	0	0.87
3.	18193.47	18377.29	18256.61	3.92%	3.64%	3.83%	0	0	0	0.84
4.	17886.97	18119.16	17966.72	1.68%	1.40%	1.59%	0.04	0.03	0	0.82
5.	17629.14	17909.71	17725.50	1.44%	1.16%	1.34%	0.11	0.11	0	0.83
6.	17420.44	17749.38	17533.42	1.18%	0.90%	1.08%	0.11	0.11	0	0.85

TABLE 11 | Descriptives for parenting variables (secondary schools).

	M(SE) in latent profiles			
	1. *Low-engagement* parents (*n* = 336; 36.05%)	2. *Balanced-Home-and-School Support* parents (*n* = 266; 28.54%)	3. *Home-Monitoring-and-Support* parents (*n* = 225; 24.14%)	4. *Comprehensive-support* parents (*n* = 105; 11.27%)
Home involvement				
Parent–child communication before school suspension	2.64** (0.07)	3.22** (0.06)	3.57** (0.08)	3.68** (0.09)
Parental monitoring of children's online activities before school suspension	1.64** (0.04)	2.55** (0.13)	3.34** (0.09)	3.57** (0.11)
Parental monitoring of children's online activities during school suspension	1.56** (0.04)	2.44** (0.14)	3.21** (0.08)	3.56** (0.13)
Parental help with homework during school suspension	1.95** (0.04)	2.54** (0.07)	2.65** (0.06)	3.09** (0.09)
Parent–child relationship during school suspension	3.12** (0.05)	3.39** (0.05)	3.43** (0.05)	3.55** (0.08)
School involvement				
Parent–teacher interactions before school suspension	1.46** (0.05)	2.40** (0.07)	1.60** (0.09)	3.17** (0.12)
Parental participation in school activities before school suspension	1.46** (0.04)	2.19** (0.09)	1.71** (0.08)	3.12** (0.13)
Parent–teacher interactions during school suspension	1.35** (0.04)	2.24** (0.07)	1.53** (0.10)	3.07** (0.13)
Parental participation in school activities during school suspension	1.16** (0.02)	1.68** (0.07)	1.27** (0.05)	2.68** (0.18)

***p < 0.01.*

TABLE 12 | SES and latent profile membership (secondary schools).

	Logits	Odds ratio
Latent profile 1 (*Low-engagement* parents)		
General home resources	−0.16 (0.22)	0.85
Home learning resources	−0.10 (0.25)	0.91
Parental education	−0.13 (0.12)	0.88
Latent profile 2 (*Balanced Home-and-School-Support* parents)		
General home resources	−0.22 (0.24)	0.80
Home learning resources	−0.46 (0.27)	0.63
Parental education	−0.14 (0.14)	0.87
Latent profile 3 (*Home-Monitoring-and-Support* parents)		
General home resources	0.17 (0.24)	1.18
Home learning resources	0.64* (0.28)	1.89
Parental education	−0.17 (0.14)	0.84

Reference category is latent profile 4 (Comprehensive-support parents).
**p < 0.05.*

primary school students' learning during the pandemic-induced school suspension. Specifically, teachers expected parents to enable students' access to learning resources provided by teachers and participate in or supervise the completion of learning activities assigned by teachers. When parents monitor and support their children's learning, they also benefit from this commitment. This is evident in Akinrinmade et al.'s (2021) study which found that parents of primary school students in Nigeria acknowledged that the extra time they spent together with their children during the pandemic-induced

TABLE 13 | Descriptives for of student outcomes (secondary schools).

	Latent profiles			
	1. *Low-engagement* parents	**2. *Balanced-Home-and-School-Support* parents**	**3. *Home-Monitoring-and-Support* parents**	**4. *Comprehensive-Support* parents**
			M(SD)	
Cognitive-emotional regulation during the school suspension	−0.03 (0.48)	0.00 (0.46)	0.04 (0.5)	0.01 (0.52)
Worries about school resumption	0.01 (0.53)	−0.01 (0.51)	−0.08 (0.56)	−0.04 (0.51)
Online learning self-efficacy during the school suspension	−0.02 (0.52)	0.08 (0.47)	0.09 (0.52)	0.18 (0.49)
Acquisition of digital skills during the school suspension	−0.04 (0.58)	0.09 (0.56)	0.09 (0.64)	0.12 (0.62)

Means indicated are factor scores of student outcomes.

TABLE 14 | Comparison of student outcomes (secondary schools).

	Mean difference (SE)
Cognitive-emotional regulation during the school suspension	
Profile 1 – Profile 2	0.38** (0.08)
Profile 1 – Profile 3	−0.24** (0.07)
Profile 1 – Profile 4	−0.09 (0.08)
Profile 2 – Profile 3	−0.62** (0.06)
Profile 2 – Profile 4	−0.47** (0.09)
Profile 3 – Profile 4	0.15 (0.09)
Worries about school resumption	
Profile 1 – Profile 2	−0.41** (0.08)
Profile 1 – Profile 3	0.27** (0.09)
Profile 1 – Profile 4	0.07 (0.08)
Profile 2 – Profile 3	0.68** (0.06)
Profile 2 – Profile 4	0.49** (0.08)
Profile 3 – Profile 4	−0.19* (0.09)
Online learning self-efficacy during the school suspension	
Profile 1 – Profile 2	0.46** (0.09)
Profile 1 – Profile 3	−0.34** (0.09)
Profile 1 – Profile 4	−0.24** (0.08)
Profile 2 – Profile 3	−0.79** (0.06)
Profile 2 – Profile 4	−0.70** (0.09)
Profile 3 – Profile 4	0.10 (0.09)
Acquisition of digital skills during the school suspension	
Profile 1 – Profile 2	0.45** (0.12)
Profile 1 – Profile 3	−0.36** (0.08)
Profile 1 – Profile 4	−0.23** (0.09)
Profile 2 – Profile 3	−0.81** (0.09)
Profile 2 – Profile 4	−0.68** (0.12)
Profile 3 – Profile 4	0.13 (0.10)

Conditional means (with SES covariates as controls) used in computing differences between latent profiles.
*$p < 0.05$; **$p < 0.01$.*

school suspension enabled them to improve the parent–child relationship and spend time discussing moral development and discipline with their children.

The benefits of parental home monitoring and support are even greater for secondary school students. Specifically, our results show that, compared to peers associated with other latent profiles of parents, secondary school students of *Home-Monitoring-and-Support* parents had the highest levels of acquisition of digital skills, had the highest levels of cognitive-emotional regulation and self-efficacy in online learning, and were the least worried about school resumption during the school suspension. Parents who commit time and resources to monitor and support their children's learning are better able to understand their children's learning needs. For example, Demir and Demir's (2021) study found that elementary and secondary school students in Turkey had lower levels of motivation (because

of Internet connection problems and social isolation) during the pandemic-induced school suspension, so parents played an important role by ensuring that their children followed the online lessons and motivating their children. In the process of monitoring and providing support, parents had a better understanding of their children's education and appreciated the value of their children's schooling. Tarsuslu et al. (2021) reported that almost half of the parents in their sample in Turkey indicated that spending time at home with their children during the pandemic-induced school suspensions strengthened their relationships with their children and the majority of parents perceived that the time spent together at home with their children enabled them to take better care of their children.

In contrast to these results alluding to the plausible benefits of parental involvement (particularly home monitoring and support), our analysis shows that primary students from the three parental latent profiles (*Low-engagement*, *Comprehensive-Support*, *Home-Monitoring-and-Support* parents) did not differ in their perceived acquisition of digital skills and cognitive-emotional regulation during the school suspension and worries about school resumption. There are no apparent reasons for this pattern of findings. However, the different patterns of results between the primary and secondary school samples underscore the importance for research on familial influences (SES, parental involvement) and student outcomes to consider contextual factors (e.g., students' grade levels or age) (Tan et al., 2019). Previous studies suggest that, compared to secondary school students, primary school students may be more dependent on parental interventions and therefore, parents need to work harder to understand their children's developmental and learning needs, cultivate a positive parent–child relationship, and be more proactive in their parenting (Knopik et al., 2021; Lau and Lee, 2021; Spear et al., 2021). Future research can expand the scope of investigation of parenting influences beyond parental involvement to identify aspects of parenting that can enhance the online learning of primary students during school suspension.

CONCLUSION

The present study unravels complex relationships among SES, parental involvement, and learning outcomes for 186 primary and 932 secondary school students and their parents during the prolonged period of COVID-19-related school suspension in Hong Kong. The three-step LPA found different patterns of associations among these variables for the primary and secondary school samples. For the primary school sample, students' SES did not predict membership in the parental involvement typology, but students whose parents provided more home monitoring and support had the highest level of online self-efficacy. As for the secondary student sample, students whose parents provided more home monitoring and support tended to have access to more home learning resources and they had the highest levels of online self-efficacy, acquisition of digital skills, and cognitive-emotional regulation, and were the least worried about school resumption.

These results contribute to theory and practice in three ways. First, it underscores the importance of elucidating nuanced patterns of parental involvement for students from different grade levels (Tan, 2018; Martin-Storey et al., 2021; Pratama and Firmansyah, 2021). Indeed, the results show that the typology of parental involvement practices differed between the matched parent–child primary and secondary school samples, and there were different levels of student outcomes among various parent latent profiles and between the primary and secondary school samples. The second contribution is the identification of *Home-Monitoring-and-Support* parents as the most plausible latent profile of parents that provides a protective function for students' home-based online learning during the pandemic-induced school suspension. Secondary school students associated with this latent profile had the highest levels of online learning (online learning self-efficacy, acquisition of digital skills) and socioemotional well-being (cognitive-emotional regulation, least worries about school resumption) while primary school students associated with this latent profile had the highest level of online learning self-efficacy. These results are important because they indicate that some aspects of parental involvement (e.g., home monitoring and support) may be more beneficial than others for student learning during the challenging times of school suspension. Therefore, parents can consider how they can devote more of their limited energy, time, and material resources to provide quality monitoring and support as opposed to other parental involvement activities. Lastly, the present study points the way forward for schools to support parents during future school suspensions. School psychologists and mental health professionals can develop intervention programs to enable parents to effectively monitor and support students' home online learning (Anderson et al., 2021; Hatzichristou et al., 2021). These programs are critical to optimize student well-being and online learning during future school suspensions due to pandemics (including COVID-19) or other compelling reasons. They contribute to the development of resilient education systems that are more fit-for-purpose in future contingencies.

Results from the present study have to be read with three limitations in mind. The first limitation is that the data was cross-sectional, so the results should not be taken to be evidence of causal relationships. Second, only three indicators (parental education, home general and educational resources) were used to measure SES, so there may be other patterns of SES-parental involvement associations if parental occupational status and family income were included as SES indicators. Third, the present study focused only on specific aspects of students' online learning (self-efficacy, acquisition of digital skills) and socioemotional well-being (cognitive-emotional regulation during school suspension, worries about school resumption). There are other aspects of student outcomes that are not investigated in the present study.

Moving forward, researchers can include more SES indicators (beyond parental education and home resources) to provide a comprehensive examination of the association between SES and parental involvement in students' home-based online learning during the pandemic-induced school suspension. There is also a need for research to investigate how different parenting styles can moderate the influence of parental involvement in supporting students' online learning. Furthermore, researchers can examine

ATLANTIS PRESS

Advances in Social Science, Education and Humanities Research, volume 487

Proceedings of the 2nd Early Childhood and Primary Childhood Education (ECPE 2020)

Parents' Involvement in Distance Learning During the Covid-19 Pandemic

Dini Kurnia Sari[1,*] Rosyidamayani T. Maningtyas[1]

[1] *Department of Primary School and Preschool Education, Faculty of Education, Universitas Negeri Malang*
[*] *Corresponding author. Email: dinidinkur97@gmail.com*

ABSTRACT

The purpose of this research is to determine how parents are involved in distance learning during the Covid-19 pandemic. This research used survey method by distributing research questionnaires using google form. The sampling technique used purposive sampling with the sample criteria being parents who have children aged 3-6 years. The questionnaire was distributed online through application Whatsapp . From 39 parents it was found that 57% of parents were at the undergraduate level of education. The results showed as many as 25 respondents or 83% of parents were in the good category in their involvement in accompanying children during distance learning. Based on the results of the study, it can be concluded that the involvement of parents in distance learning during the Covid-19 pandemic was in a good category.

Keywords: *Parental Involvement, Distance Learning, Covid-19 Pandemi*

1. INTRODUCTION

Since it was determined that covid-19 was a world pandemic, WHO asked all countries to immediately take steps to prevent the transmission of covid-19. Covid-19 is an infectious disease that was first discovered in Wuhan, China in December 2019. Covid-19 attacks the respiratory tract which causes respiratory infections such as pneumonia, MERS, and SARS. The Indonesian government's efforts in preventing the transmission of Covid 19 through the appeal of President Joko Widodo's policy by implementing Large-Scale Social Restrictions (PSBB), Social Distancing or Physical Distancing which appeal to all Indonesians to work from home, learn from home, and worship from home (Nurhalimah , 2020) .

The Covid-19 pandemic caused upheaval in almost all sectors, such as the economy, social, culture and education around the world, such as the closure of offices, schools, universities, air, land and sea transportation stops and the closure of shopping centers. In the education sector, the Ministry of Education and Culture of the Republic of Indonesia, through a circular issued on March 24, 2020, stated that during the Covid-19 emergency period, learning at all levels of education from early childhood education to college was carried out at home or online . Educational activities such as administration, evaluation, admission of new students and other educational activities are also carried out online. This policy was carried out to break the chain of spreading covid-19 (Minister of Education and Culture Circular Letter No.4 of 2020 concerning education policies during the emergency period of the spread of Covid-19, 2020).

Various government efforts in preventing the transmission of covid-19 certainly have a significant impact on all aspects of children's lives. UNICEF applead the government to realize that Covid-19 pandemic has impacts on children's health, welfare, development and future. Children who do not understand about Covid-19 can experience mental disorders because they are depressed and feel excessive fear. Therefore, parents must be sensitive if their children have shown signs of experiencing stress and must take immediate action (UNICEF, 2020).

During the Covid-19 pandemic, children and their parents must be at home continuously. The learning alternative chosen during the COVID-19 emergency is online learning. Online learning has been carried out almost all over the world. Online learning is a distance learning process by utilizing internet-based digital media that is able to support the learning process without physical contact between teachers and students, that can make boredom and stress on children, even parents. Parents must have a way to reduce children's boredom

Copyright © 2020 The Authors. Published by Atlantis Press SARL.
This is an open access article distributed under the CC BY-NC 4.0 license -http://creativecommons.org/licenses/by-nc/4.0/.

while at home. Parents need to pay attention to children's psychosocial needs (Rohayani, 2020).

The implementation of distance learning for the early childhood education level and kindergarten cannot be carried out independently by children without the assistance of parents. Early childhood requires direct involvement of parents as companions and guides to participate in a series of distance learning. Parents are expected to be able to guide children to learn from home and replace the role of teachers at school. Starting from providing learning facilities in the form of internet -based digital media, until learning management at home must be managed by parents. Therefore, the importance of the role and guidance of parents in achieving distance learning goals.

Current conditions in the field indicate that distance learning which is carried out at home with the guidance of parents, encountered several obstacles. Such as the parents' lack of understanding of the material, difficulties in growing interest and motivation to teach the child, limited time to accompany the child to learn because they have to work, lack of patience in teaching children at home, lack of facilities and the difficulty of using gadget and Internet connection services. This raises the saturation and the desire of parents to the institution to immediately conduct face-to-face meetings at school as usual.

The results of research by Lilawati (2020) regarding the role of parents in supporting learning at home during the pandemic state that during distance learning, parents help and guide in the work of assignments given by the teacher and learning facilities at home are not more profitable for students when compared to facilities. learning in school according to some parents. Based on the background and previous research, this research is very important to find out how the parents' involvement in accompanying children by distance learning during the Covid-19 pandemic.

2. METHOD

The method used in this research is a survey method, where primary data collection is done by distributing research questionnaires to respondents. The research questionnaire was in the form of questions about parental involvement in distance learning. The sampling technique used purposive sampling with sample criteria are parents who have children aged 3-6 years. The consideration is that at the age of 3-6 years, usually children are at the preschool or kindergarten level who not been able to carry out distance learning independently without parental assistance.

Due to pandemic conditions, a questionnaire was created using Google Form and distributed online via WhatsApp. The distribution of questionnaires was carried out for four days from 9 September 2020 to 12 September 2020 with 39 respondents obtained. The questionnaire instrument in the form of 9 items included the provision of facilities, mentoring time, material understanding, activity management, use of media to the feelings of parents while accompanying children. in distance learning. The assessment of the questionnaire items used a Likert scale, which is often, sometimes, never. Data processing using Microsoft Excel program. The qualifications for the range of values to involve parents in distance learning will be presented in table 1 below.

Table 1. Value Range of Parental Involvement in Distance Learning

Score	Qualification
91-100	Very good
75-90	Well
60-74	Pretty good
40-59	Not good
<40	Very Less Good

3. RESULT AND DISCUSSION

The latest parental education data obtained from the results of filling out the questionnaire is 17% at the junior high school level or as many as 5 respondents, 47% at the senior high school or vocation school level or as many as 14 respondents, 57% at the bachelor level or as many as 17 respondents, and 10% at the magister level or as many as 3 respondents.

Based on the data, it can be concluded that the parents' education level is at the S1 higher education level. The percentage of parents' latest education can be seen in Figure 1 below.

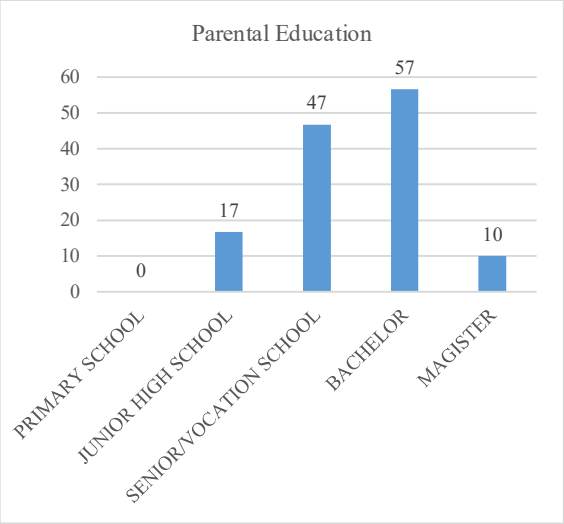

Figure 1 Percentage of Parents' Latest Education**.**

The level of parental education affects the continuity of children's education. The mindset and educational orientation given to their children will be influenced by the level of education of the parents.

Table 2. Percentage of Parental Involvement During Distance Learning

No.	Aspect	Average (%)
1	Provision of facilities and infrastructure in the form of mobile phones and Internet service coverage during distance learning	**1.01**
2	Granting permission to play outside the home during the Covid 19 pandemic	**0.82**
3	Take the time to accompany the child during distance learning	**1.08**
4	Fostering children's interest in learning at home	**1.04**
5	Assistance in carrying out school assignments	**1.02**
6	Understanding of learning material by parents	**1.04**
7	Management of children's play and learning at home	**0.9**
8	Utilization of various learning media	**0.97**
9	Degree of parent saturation during distance learning	**0.89**

The higher the education of parents, the more open parents think about education and how to educate their children (Novrinda et al., 2017). The results of data collection on the parents' involvement in long-distance learning during the Covid 19 pandemic can be seen in table 2. Table 2 shows that the highest average parental involvement is taking the time to accompany children during distance learning.

Meanwhile, the involvement of parents in managing children's play and learning schedules is in the lowest rank, with an average percentage of 0.9. This means that the management of children's play and learning at home still needs to be improved. Parents must make an agreement with their children about daily hours related to play, study, rest, and other activities during the Covid-19 pandemic, which means that children spend more time at home.

The role of parents during the Covid-19 pandemic in general is to become educators, mentors and supervisors as well as providers of a sense of security and comfort when children are at home. The condition when children gather with family has a higher intensity than just activities at home during the pandemic. Based on the research results, it was found that the percentage of children's play and learning activity management at home only reached 0.9%. This shows that there are limitations for parents in providing play and learning activities to children at home during the pandemic period which can have an impact on the emergence of children's boredom at home. These findings are in line with Gloria's research (2020) which states that activities carried out only at home will cause boredom and make children fussy, so that the readiness of parents is very important in dealing with fussy children, of course starting from the ability of parents to deal with their own boredom.

The qualification data for parental involvement in this study were obtained from the results of filling out a questionnaire on parental involvement with 39 respondents. The frequency distribution of parental involvement data can be seen in table 3. Based on Table 3 it is known that there are 8 respondents or 27% are in the very good category, while as many as 25 respondents or 83% are in the good category, and 5 respondents or 17% are in the quite good category, 3% or 1 respondent is included in the unfavorable category, and there were no respondents in the very unfavorable category. The percentage regarding parental involvement in distance learning can be seen in Figure 2.

Table 3. Frequency Distribution of Parents' Involvement in Distance Learning

Score	Category	Frequency	Percentage
91-100	Very good	8	27
75-90	Well	25	83
60-74	Pretty good	5	17
40-59	Not good	1	3
<40	Very Less Good	0	0
	Total	39	

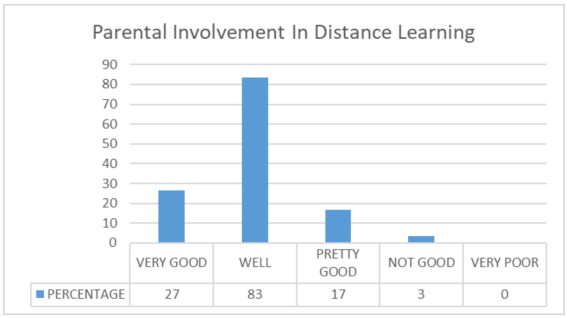

Figure 2 Percentage of Parents' Involvement in Distance Learning.

In Figure 2 it is known that the majority of parental involvement in distance learning is categorized as good. This is known from the acquisition of a higher percentage in the good category, which is 83%. It can be concluded that the involvement of parents in distance learning falls into the good category.

School is a second home for children, where children feel comfortable, fun, full of meaning and warm. At school, children can freely socialize with their friends, teachers, school guards, sellers in the canteen and anyone else in the school environment. However, during the current pandemic, children can only dream of being able to play with their friends and explore new things together at school. Research by Sari et al (2020) states that during the Covid-19 pandemic, children tend to be fussy because they don't go to school and feel missing their friends and teachers.

Based on the results of research on the parents' involvement in distance learning in the aspect of taking

time to accompany children, getting the highest percentage compared to other aspects is 1.08%. Since the implementation of work from home, parents spend more time with their children. This makes it easy for parents to take the time to assist children in learning and playing. Many parents agree that they are the ones who help their children complete tasks from school. The influence of the role of parents on the application of distance learning during the Covid-19 pandemic is very high. This is in line with Lilawati's research (2020) which states that the influence of parents as a motivator to foster children's motivation and interest in learning is the most visible.

Judging from the latest education data of parents, in general parents are very well educated, namely 57% at undergraduate level. With the high educational background of parents, the use of gadgets and internet services is not a significant problem. This is in accordance with Sari et al.'s (2020) research regarding the readiness of mothers to play with their children during the Covid-19 pandemic "at home", which states that with a high educational background, internet access and use of gadget are very easy for parents. For them, the internet is a means of finding educational and parenting references as well as a source of reference for designing media or playing activities with children at home.

The results of the research which states that the involvement of parents in distance learning is in the good category also cannot be separated from the level of parental understanding of the learning material. The results of the study on the aspects of parental understanding of the learning material obtained a percentage of 1.04. This shows that the learning material provided by the teacher can be understood and mastered well by parents. So that assistance in the learning process at home can be said to be good. In line with the research of Irma et al (2019) which states that the understanding of material and broad thoughts that parents have is very useful to help the learning process at home. Parents must understand well the learning material from schools, so that the implementation of education at home can be successful (Wardani & Ayriza, 2020).

4. CONCLUSION

Based on the results of the research and analysis that has been conducted, it can be concluded that the involvement of parents in distance learning during the Covid-19 pandemic is categorized as good with a percentage of 83%. The results showed that the level of education of the parents was also categorized as good because 57% of parents were at the higher education level. This affects the provision of learning facilities such as the use of gadgets and internet services and the understanding of learning materials. During the Covid-19 pandemic, in general parents, Because the application of work from home parents can spend more of their time accompanying children to study or just play. Parents can also foster motivation and interest in children's learning well, but they have enough problems with children's boredom when they are at home continuously which causes children to be fussy.

REFERENCES

[1] A. Wardani & Y. Ayriza, “Analisis Kendala Orang Tua dalam Mendampingi Anak Belajar di Rumah Pada Masa Pandemi Covid-19,” Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, vol. 5, no. 1, pp. 772-782, 2020.

[2] A. Lilawati, “Peran Orang Tua dalam Mendukung Kegiatan Pembelajaran di Rumah pada Masa Pandemi,” Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, vol. 5. No. 1, pp. 549-558, 2020.

[3] K. Khadijah, “Pola Kerja Sama Guru Dan Orangtua Mengelola Bermain Aud Selama Masa Pandemi Covid-19,” Kumara Cendekia, vol. 8, no. 2, pp. 154-170.

[4] N. Nurhalimah, “Upaya Bela Negara Melalui Sosial Distancing Dan Lockdown Untuk Mengatasi Wabah Covid-19 (Efforts to Defend the Country Through Social Distancing and Lockdown to Overcome the COVID-19 Plague),” 2020. Available at SSRN 3576405

[5] UNICEF, “COVID-19 dan Anak-anak di Indonesia, Agenda Tindakan untuk Mengatasi Tantangan Sosial Ekonomi”, Jakarta: United Nations Children’s Fund, 2020.

[6] M. Amini, “Profil keterlibatan orang tua dalam pendidikan anak usia TK,” Jurnal Ilmiah Visi, vol 10, no. 1, pp. 9-20, 2015.

[7] N. Novrinda, N. Kurniah & Y. Yulidesni, Peran “Orangtua Dalam Pendidikan Anak Usia Dini Ditinjau Dari Latar Belakang Pendidikan,” Jurnal Ilmiah Potensia, vol. 2, no. 1, pp. 39-46, 2017.

[8] Gloria, “Sehat Mental Selama di Rumah dengan Aktivitas Positif Bersama Keluarga,” Ugm.Ac.Id, 2020.

[9] C. Irma, K. Nisa & S. Sururiyah, “Keterlibatan Orang Tua dalam Pendidikan Anak Usia Dini Di TK Masyitoh Purworejo,” Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 2019. DOI: https://doi.org/10.31004/obsesi.v31i.152

Open Access Library Journa
2023, Volume 10, e10512
ISSN Online: 2333-9721
ISSN Print: 2333-9705

Importance and Types of Parenta Involvement in Education

Josephine Oranga, Audrey Matere, Eliud Nyakundi

Kisii University, Kenya
Email: josephineoranga@kisiiuniveristy.ac.ke

How to cite this paper: Oranga, J., Matere, A. and Nyakundi, E. (2023) Importance and Types of Parental Involvement in Education. *Open Access Library Journal*, **10**: e10512.
https://doi.org/10.4236/oalib.1110512

Received: July 16, 2023
Accepted: August 22, 2023
Published: August 25, 2023

Copyright © 2023 by author(s) and Open Access Library Inc.
This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).
http://creativecommons.org/licenses/by/4.0/

Open Access

Abstract

Studies indicate that parental participation and involvement in education has a positive influence on a child's academic outcomes. This article, thus, explores the significance, types and components of parental involvement in education in an effort to enlighten stakeholders on the role of parents in their children's education. Accordingly, the benefits of parental involvement in education include: fewer behavioral problems amongst learners, better school attendance, increased academic achievement, better adaptation at school, better acquisition and demonstration of social skills, development of a strong feeling of self-worth and the development of a lifelong love for learning. Additionally, parental involvement helps build suitable school environments for children to thrive in and also helps cultivate good relations between teachers and parents. Consequently, the components and types of parental involvement in education include: volunteering at school, guiding home-based learning, constant communication with the school, participating in school decision-making processes, provision of learning resources, creation of safe home environments for children (environments that encourage learning at home) and modelling/encouraging good behavior. This article paid close attention to these components in an attempt to enlighten parental participation in education with reference to Joyce Epsteins's parental involvement framework.

Subject Areas

Sociology of Education

Keywords

Benefits, Importance, Types, Parental Involvement, Education

1. Introduct

A parent is one who gives birth, nurtures or raises a child. Consequently, a parent is a man or woman who takes on all the parental responsibilities towards a child. This could also be a stepmother, an adoptive father, or a child's relative (Virasiri, Yunibhand, Chaiwawat, 2011) [1].

On the other hand parenting refers to raising children from infancy to adulthood, in an environment of nurturance (Virasiri, Yunibhand, Chaiwawat, 2011) [1]. Similarly Epstein (2010) [2], contends that parenting is the rearing of children and in particular the care, guidance and love given by a parent to a child. Accordingly, parenting is the single largest variable implicated in children's education, substance misuse, truancy, school disruption, under-achievement in class and juvenile crime.

As a result, parents have an important role to play in the upbringing and modelling of their children's behaviour as children stay at home with the parents much longer than at school and also due to the fact that children have more in-family interaction than schooling (Epstein, 2010) [2].

2. Significance and Importance of Parental Involvement in Education

A growing body of research suggests that when parents collaborate with the school effectively, students learning outcomes improve (Meadan, *et al.* 2014 [3], Fan & Chen, 2001 [4]). Dixon (2008) [5], describes parental involvement in education as a combination of commitment and active participation on the part of the parent to the school and to the student. Accordingly, parental involvement, in almost any form, produces positive measurable gains in students' achievement.

Furthermore, numerous studies indicate that the more parents participate in their children's education in a sustained manner, at every level, including in advocacy, decision making, school fundraising, volunteering, acting as para-professionals and as home teachers, the more student's achievement improves (Sakaue, Wokadala & Ogawa, 2023) [6]. Similarly, Reinke (2013) [7] contends that parental involvement helps meet parental information needs concerning their children's education, meet parents' emotional needs, use parents as change agents and becomes a source of information regarding the student, at school. Accordingly, parents who avail books and other learning resources, make time to read for their children, guide television watching, take trips with their children, provide stimulating experiences and monitor behavior contribute to their children's academic achievement. Consequently, parents should complement teachers' efforts by exposing the children to practical learning environments like visiting museums, game parks or agricultural production or manufacturing firms as this would enrich learning and provide vivid education experiences for children (Griffin & Steen 2010) [8]. Hence, in order to provide suitable education, the involvement of parents both at school and at home is imperative.

Similarly, Fan and Chen (2001) [4] contend that parental involvement has a

positive influence on students' academic performance and is also an important ingredient for the remedy of many problems in education. Moreover, according to the authors, one fundamental way in which parents can transmit the cultural value of education is by becoming involved in their children's schooling.

Fan and Chen (2001) [4] further indicate that parental involvement in education rotates around three main constructs, these are: supervision, communication and parental expectation.

Several studies also suggest that parental support, involvement, encouragement, and positive reinforcement are all well-linked to children's learning competence, healthy social relations, a strong feeling of self-worth and fewer behavioral problems (Griffin & Steen, 2010 [8]; Oranga, Obuba & Boinett, 2022) [9]. The studies also contend that parental involvement helps cultivate good relations between teachers and parents and helps build a more suitable school environment for children to thrive in.

Additionally, parental engagement and collaboration ensures that parents help with continuity and practice at home of skills learnt at school (Oranga, Obuba, Sore & Boinett, 2022) [10]. Consequently the authors indicate that when parents are adequately involved in their children's education, they act as a source of information regarding students' progress and challenges that students' encounter at home, necessitating the need for parents to adequately participate in their children's education.

However, despite the numerous benefits that accrue from parental involvement and participation in education, a study by Fan and Chen (2001) [4] reveals that parents have lost the original teaching function, thereby impacting negatively on their children's schooling and learning. Accordingly, parents have become distant observers in their children's learning process, necessitating the need to explore the components of parental participation in education with the ultimate goal of enhancing parental involvement in education. The following section thus elaborates on the different components and ways through which parents can participate in their children's education as postulated by Epstein (2003 [11], 2011 [12], 2010 [2] & 2017 [13]).

3. Components of Parental Involvement in Education as Postulated by Joyce Epste

Epstein (2011 [12]; 2010 [2]) indicates that there are many reasons for establishing partnerships between the school, family and community at large. Accordingly, the main reasons are enhancing learners' academic outcomes, enhancing school programmes and school climate, developing leadership and parental skills and helping parents and entire families to connect with others in the community and school. Hence the components of parental involvement, as derived from varied studies by Epstein (2003 [11], 2011 [12], 2010 [2] & 2017 [13]) are thus presented in **Figure 1**.

As shown in **Figure 1**, in accordance with Epstein (2011) [11], parental involvement in education should encompass volunteering, home based learning,